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STATUS OF HEALTH IN THE FOUR HEALTH AREAS OF THE CITY OF TORONTO

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STATUS OF HEALTH
IN THE FOUR HEALTH AREAS
OF THE
CITY OF TORONTO*

A Report by
The Community Health Information Section
City of Toronto
Department of Public Health
May 3, 1983

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* Supported by The Ontario Ministry of Health, Grant #CHS-I15

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I. INTRODUCTION

In November 1981, the Toronto Department of Public Health began the process of decentralizing its programs, services and structure. As part of this decentralization, four Health Areas were created: Western Health Area (WHA), Northern Health Area (NHA), Downtown Health Area (DHA), and Eastern Health Area (EHA).

Although part of this decentralization was meant to ease the hierarchical burdens of a large, bureaucratic health department, it was also understood that a decentralized organization could better serve the specific health needs of the community. It was felt that the City of Toronto, diverse in its age structure, ethnic composition, and social and health problems, should not be receiving only one form of delivery of Public Health services. Rather, the Department of Public Health should be fashioning its services to meet the many and varied needs of the public it serves.

It was in response to this problem-specific approach to public health that this report was conceived. It was felt that a document was needed to examine the health needs of the four Health Areas of the City. This document could examine the data already available in the Department of Public Health, but in a way which would enable health planners in the department to gain a perspective for each of the four new Areas.

A good deal of preliminary work has preceded the completion of this report. In 1980, the Health Information Team of the Health Advocacy Unit began assembling the data bases necessary for the examination of health status in the City. As a result, the Department of Public Health now collects on its own, or has access to, data on the population, natality, hospital morbidity, communicable disease, and mortality. Analyses, as you will see, can be carried out at the census tract level, or for the City as a whole.

Using these data bases, the Department of Public Health now has the capability of calculating the following:

1) The age and sex-adjusted mortality rate for every major cause of death for the past ten years;

2) The potential years of life lost for each major cause of death for the past ten years;

3) Age and sex-specific mortality rates for each major cause of death for the past ten years;

4) Life expectancy for males and females for the past ten years;

5) Ten-year or shorter trends of mortality;

6) Standardized mortality ratios comparing Toronto's mortality rates to the province as a whole;

7) comprehensive information on sociodemographic variables for the population; and

8) information on high risk pregnancy factors and birth outcomes.

The analysis of health data and health statistics is not new in the field of public health and the methods used to analyze Area-specific data are the same ones which are used when examining the health status for the City as a whole. The importance of this report, however, will be shown in the next few months. It is hoped that policymakers in the City and staff in the Department of Public Health will use this report in decision-making, program planning, and evaluation. Only then can Public Health in the 1980's be based on a strong foundation of knowledge.

II. TYPES AND SOURCES OF DATA

The Department of Public Health uses a number of different sources of data to examine the various dimensions of health status in the City. As Table 1 indicates, the DPH collects information on population, natality, morbidity and mortality.

A. Population Data

Population data come from two sources: the Revenue Assessment roles, supplied to the Department by the Metro Planning Department. and the Canada Census. A Revenue Assessment, until this past year, has been done on a yearly basis in Ontario, and therefore has provided the Department with up-to-date information on the age and sex distribution of the population. Beginning in 1982, however, the assessment is being carried out every three years, with yearly up-dating. There are known undercounts in the very young ages (less than 5 years) and the very old age groups in assessment data. Nevertheless, these data provide a recent profile of the population by age and sex.

The Department of Public Health also has access to data from the 1976 Census. These data can be extremely useful for examining the demographic composition of the population. However, because they are six years old,

Table 1: Types and Sources of Data in the Department of Public Health.

I Population Data

- Assessment roles (1970-present)*
- Canada Census (1976, 1981)

II Natality

- birth certificates*
- abortions (supplied by the Ministry of Health)
- notifications of stillbirth*

III Morbidity

- hospital separations (supplied by the Ministry of Health)
- venereal disease reports+
- tuberculosis reports+
- other communicable disease reports+

IV Mortality

- death certificates*

* available at the census tract level from 1979 to the present.

+ available at the census tract level from January, 1983 to the present.

they are likely not accurate for certain neighbourhoods, income and ethnic groups. The 1981 census data are beginning to arrive in the Department of Public Health, and these will give a more up-to-date demographic profile of the City of Toronto.

B. Natality Data

Natality data in the department consist of information on live births, stillbirths, and abortion. Data are extracted from every birth certificate of a child born to a Toronto resident. These data consist of such important health variables as date of birth, age of mother, marital status of mother, weight of newborn, parity, mother's country of birth, and census tract of residence. Live birth data are considered to be fairly reliable and complete, although certain variables, such as country of birth or address, may be missing or inaccurate.

Stillbirth data consist of information on date of stillbirth, age of mother, age of father, marital status of mother, census tract of residence, and cause of stillbirth. Abortion data are supplied to the Department of Public Health by the Ministry of Health. These data are tabulations from each Ontario hospital's abortion committee, but do not include abortions done outside the province.

In addition, it is recognized that approximately 10-15% of abortions assigned to the City of Toronto actually represent abortions from the other boroughs of Metropolitan Toronto.

C. Mortality Data

The Toronto Department of Public Health also receives a copy of the death certificate of every Toronto resident who died within or outside the City. These Vital Statistics forms provide information on date of death, date of birth, sex, address, occupation, country of birth, and cause of death. The underlying cause of death is coded in the Toronto Department of Public Health by the 9th Revision of the World Health Organization, International Classification of Disease.

There are a number of problems in using data from death certificates. These problems include incorrect physician recording, selection of a single cause of death when there may have been several, and changes in technology which affect diagnosis, thereby affecting trends of particular diseases over time. In spite of these difficulties, however, mortality data can be used to study disease occurrence in any jurisdiction. These analyses provide one part of the profile on the status of health and can be useful in health planning, policy formulation and further research.

D. Morbidity Data

Morbidity data come from a number of sources. The Department of Public Health receives reports of venereal disease, tuberculosis, and other communicable diseases from private physicians, laboratories, clinics, and hospitals. The number of cases tabulated each year by the health department, however, is considered to be a gross underestimate of true disease in the community. Nevertheless, these data are useful in examining trends and for giving a general profile of reported communicable disease in the City of Toronto.

The Hospital Medical Records Institute (HMRI) collects and analyzes hospital statistics, and these data are available to the department through the Ministry of Health. Unfortunately, the data do not at present disaggregate below the level of the City as a whole, and it is likely that the group "City of Toronto Residents" may also include residents from other Metro boroughs.

It also should be noted that these data do not indicate the number of individuals who suffer from a particular illness and are hospitalized for it. If a person enters hospital several times in one year, each hospitalization is counted, and because of the way the data are collected and coded, there is no way to assess which were repeat visits.

The information available on hospital morbidity is fairly extensive, however. Of particular interest is the information on hospital days and separations, broken down by sex into four broad age groups (and therefore less detailed than our mortality data). Such information tells how burdensome a particular health problem is (number of hospital days) and how frequently it occurs (hospital separations).

Three types of data primarily are presented in this report. These are 1) demographic data, based on the Ministry of Revenue assessment roles, the 1976 Canada Census, and preliminary data from the 1981 Canada Census; 2) natality data, taken from the birth certificates and notifications of stillbirths of City of Toronto residents; and 3) mortality data, taken from the death certificates of City of Toronto residents. These data are available at the census tract level and thus can be presented for any area of the City. In this paper the data primarily are analyzed at the Health Area or census tract level.

III. DEMOGRAPHIC INFORMATION

A. Age and Sex Distribution of the General Population

The population pyramids in Figures 1 and 2 provide an easy method of determining the age and sex profile of residents in the City of Toronto and its Health Areas. It can be seen in Figure 1 that the age and sex distribution of the City has changed since 1971. The overall shapes of the two pyramids suggest that the older age groups have increased, while the younger age groups have decreased. The bulge at the 20-24, 25-29 and 30-34 age groups has become more pronounced. The overall population of the City of Toronto has decreased by approximately 100,000 in the past ten years.

The population pyramids in Figure 2 and the data in Tables 2-4 indicate very different age and sex distributions for the four Health Areas. According to Table 2, the DHA had the smallest population (87,035) in 1981, representing 14.5% of the total City population. The NHA had the largest population with 221,121 residents, or 36.9% of the City population. The WHA's 163,970 residents accounted for 27.4% of the City, and 21.2% (or 127,385 residents) were in the EHA.

In 1981 all of the Health Areas had the largest portion of their population in the age group 20-34. This is most

FIGURE 1

POPULATION OF TORONTO BY FIVE-YEAR AGE GROUPS AND SEX
1971 SUPERIMPOSED UPON 1981

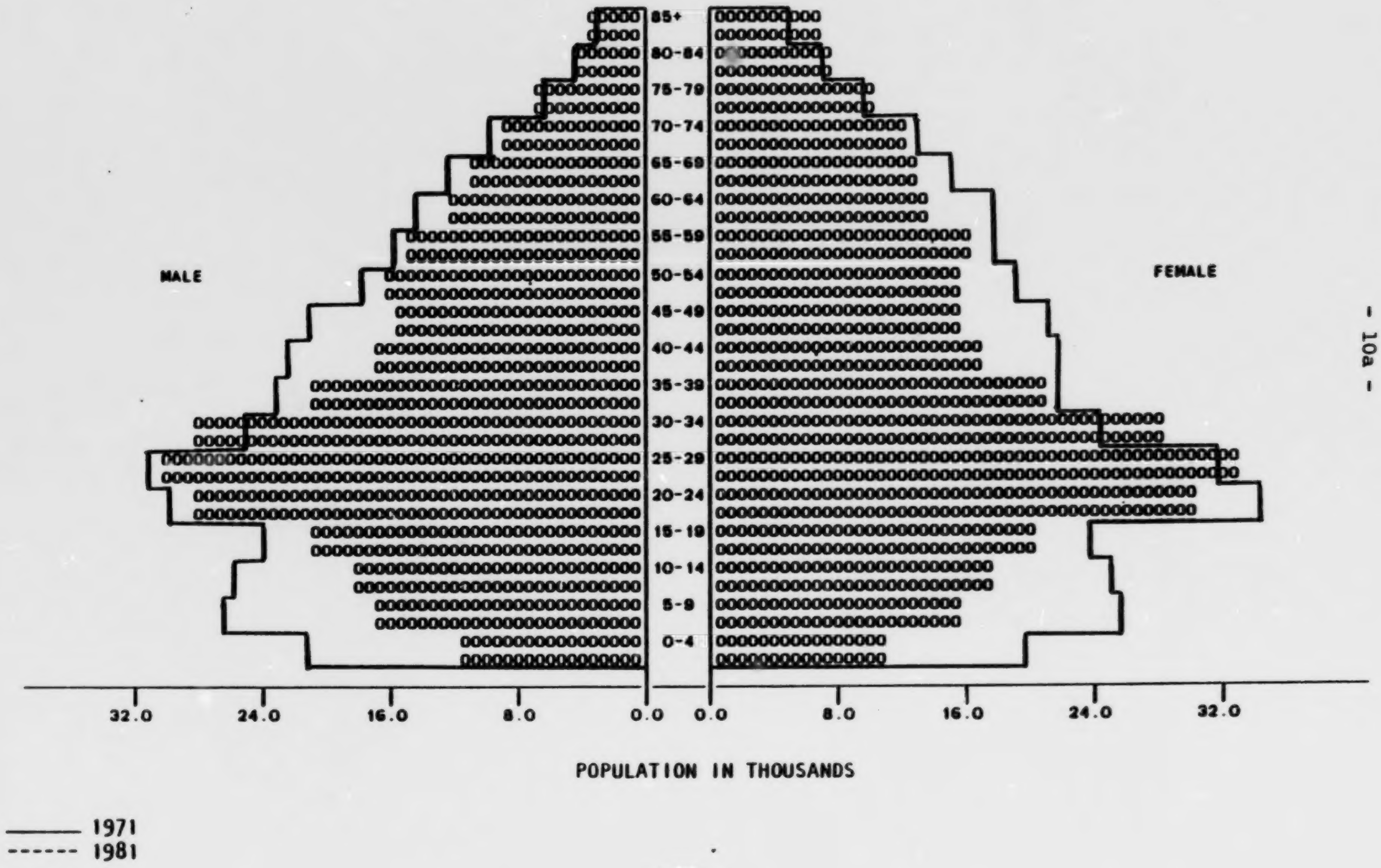
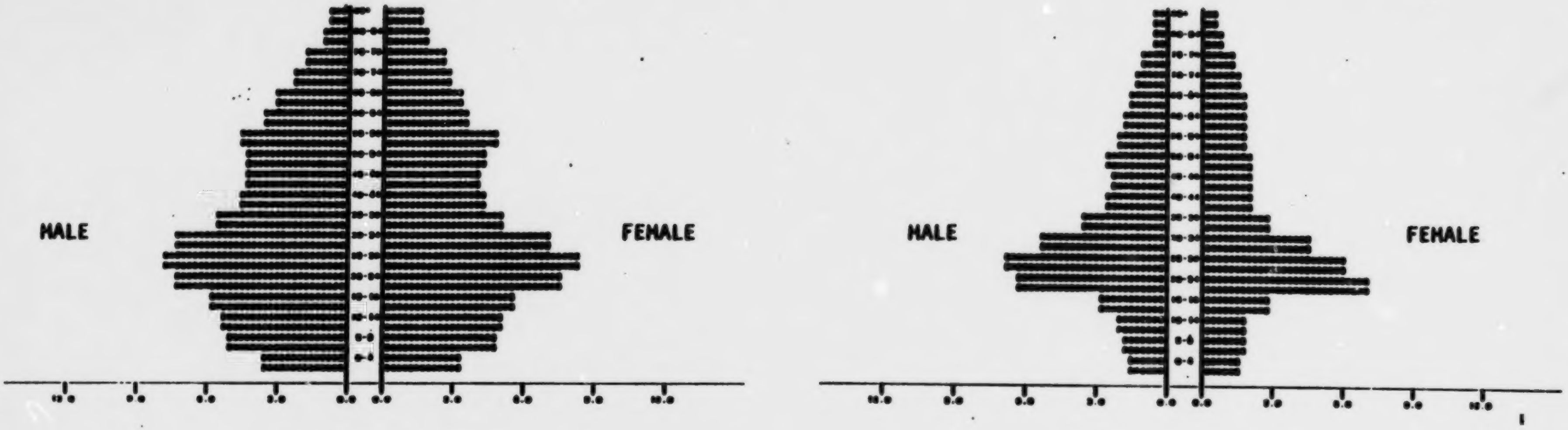


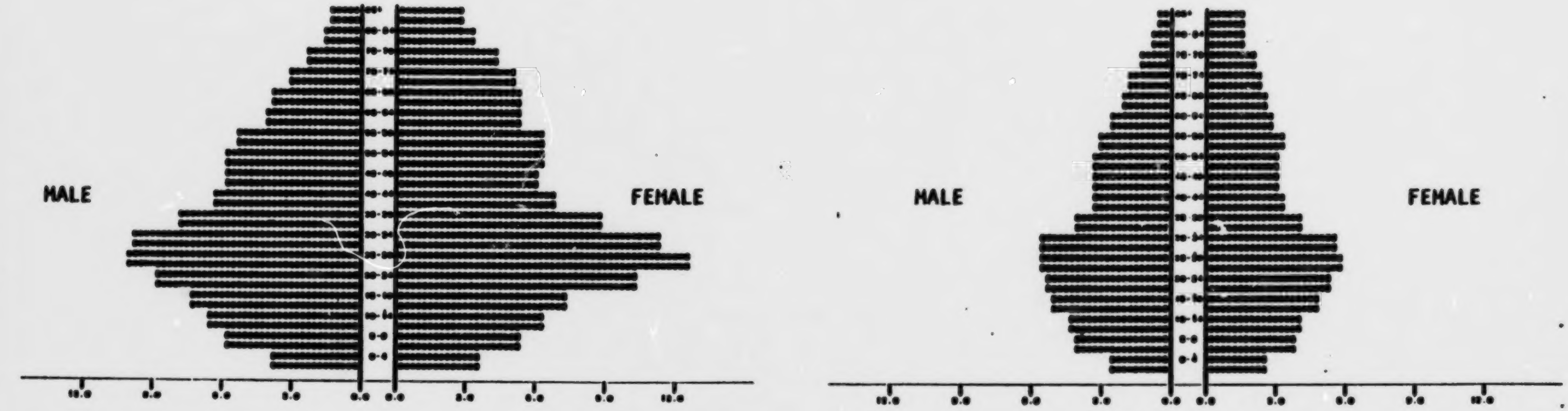
FIGURE 2

POPULATION DISTRIBUTION BY FIVE-YEAR AGE GROUPS AND AREA
1981



WESTERN HEALTH AREA

DOWNTOWN HEALTH AREA



NORTHERN HEALTH AREA

EASTERN HEALTH AREA

Table 2: Age Distribution of the Population by Health Area in 1981.*

Age Group	WHA	NHA	DHA	EHA	City
0-4	9,805	10,460	3,665	7,540	31,470
5-9	8,875	10,580	3,095	7,740	30,290
10-19	22,015	28,100	8,930	18,895	77,940
20-34	49,100	65,920	33,145	38,030	186,195
35-54	38,430	53,845	19,940	28,750	140,965
55-69	23,235	30,441	11,390	16,300	81,366
70+	12,510.	21,775	6.870	10,130	51,285
Total	163,970	221,121	87,035	127,385	599,511
% of City	27.4	36.9	14.5	21.2	100.0

* from 1981 Canada Census.

Table 3: Age Distribution of Males by Health Area in 1981.

Age Group	WHA	NHA	DHA	EHA	City
0-4	5,015	5,445	1,835	3,885	16,180
5-9	4,525	5,510	1,595	4,010	15,640
10-19	11,120	14,195	4,470	9,655	39,440
20-34	24,265	30,235	17,200	19,020	90,720
35-54	20,185	26,245	10,995	14,825	72,250
55-69	11,455	13,431	5,640	7,460	37,986
70+	4,915	7,025	2,815	3,565	18,320
Total	81,480	102,086	44,550	62,420	290,536

* from 1981 Canada Census.

Table 4: Age Distribution of Females by Health Area in 1981.

Age Group	WHA	NHA	DHA	EHA	CITY
0-4	4,790	5,015	1,830	3,655	15,290
5-9	4,350	5,070	1,500	3,730	14,650
10-19	10,895	13,905	4,460	9,240	38,500
20-34	24,835	35,685	15,945	19,010	95,475
35-54	18,245	27,600	8,945	13,925	68,715
55-69	11,780	17,010	5,750	8,840	43,380
70+	7,595	14,750	4,055	6,565	32,965
Total	82,490	119,035	42,485	64,965	308,975

* from 1981 Canada Census.

dramatic in the DHA where 38.1% of its population was in this age group. On the other hand, the NHA had the largest elderly population with 10.1% over the age of 70. The WHA had the lowest proportion of elderly (7.6%), but one of the highest proportions of children under the age of 4 (6.0%). The shape of the EHA pyramid is quite different from the other Areas in that no one age group extends far beyond the rest.

Tables 3 and 4 provide an age distribution by Health Area for males and females separately.

B. The Young and the Old in the City

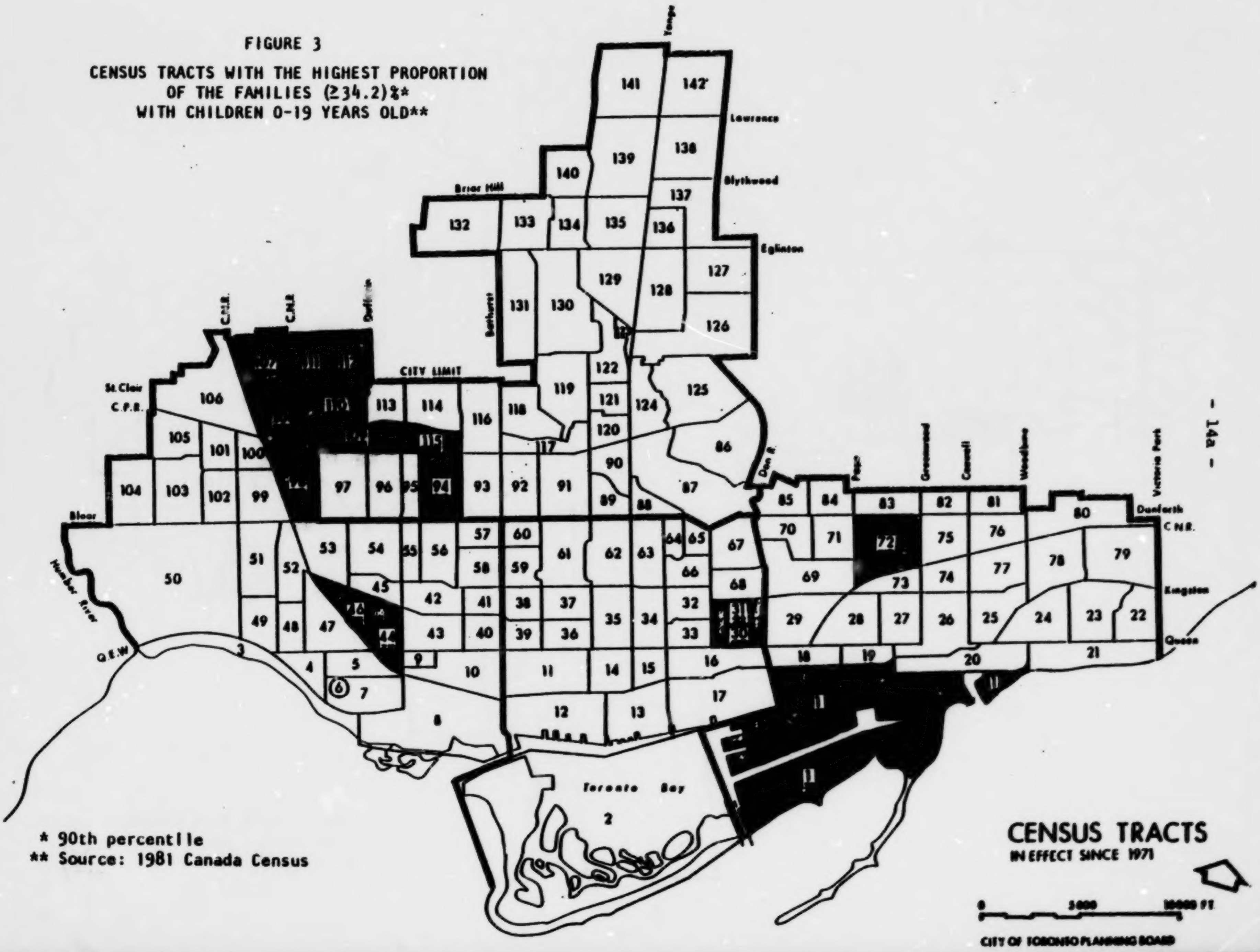
Besides examining the age and sex distribution of the population in each of the four Health Areas, it is also possible to examine these factors throughout the City by census tract. The following maps of the City of Toronto (Figures 3-5) present a picture of the young and the old in the City according to geographic location. These data are based on the preliminary data for the 1981 Canada Census.

Figures 3 and 4 show the census tracts in which:

a) 34.2% or more of the families (the 90th percentile) have children between the ages of 0 and 19 (Figure 3); and

FIGURE 3

CENSUS TRACTS WITH THE HIGHEST PROPORTION
OF THE FAMILIES (≥34.2)%*
WITH CHILDREN 0-19 YEARS OLD**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Danforth
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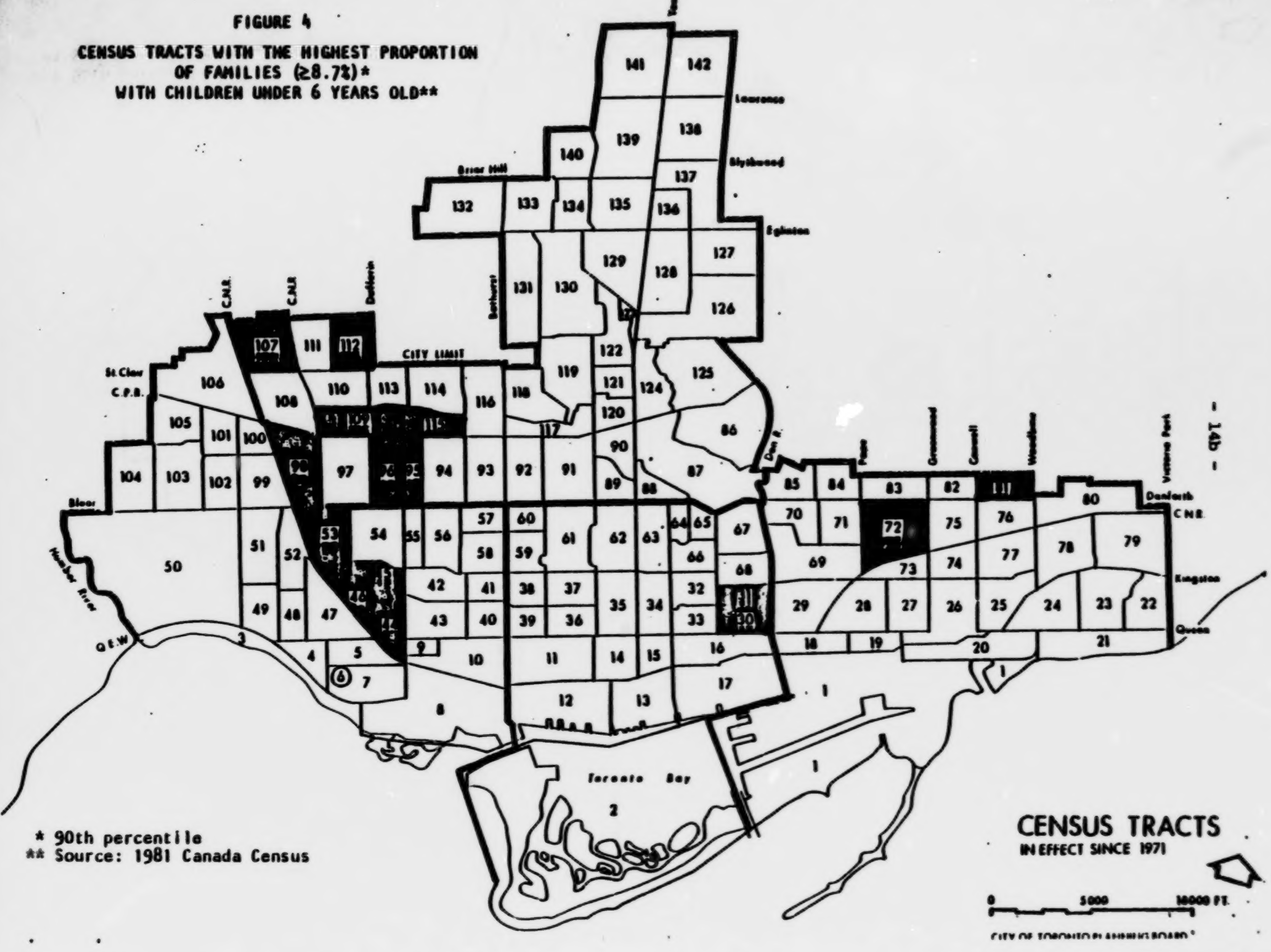
Kingston
Queen
Toronto Bay
CENSUS TRACTS
IN EFFECT SINCE 1971
0
5000
10000 FT
CITY OF TORONTO PLANNING BOARD

* 90th percentile
** Source: 1981 Canada Census

FIGURE 4

CENSUS TRACTS WITH THE HIGHEST PROPORTION OF FAMILIES (≥8.7%)* WITH CHILDREN UNDER 6 YEARS OLD**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* 90th percentile
** Source: 1981 Canada Census

b) 8.7% or more of the families (the 90th percentile) have children under the age of 6 (Figure 4).

Many of the census tracts are the same in the two maps. The western end of the NHA and the central diagonal portion of the WHA are the areas where the majority of census tracts with high concentrations of children are found. The DHA and EHA have few census tracts with a high proportion of young families.

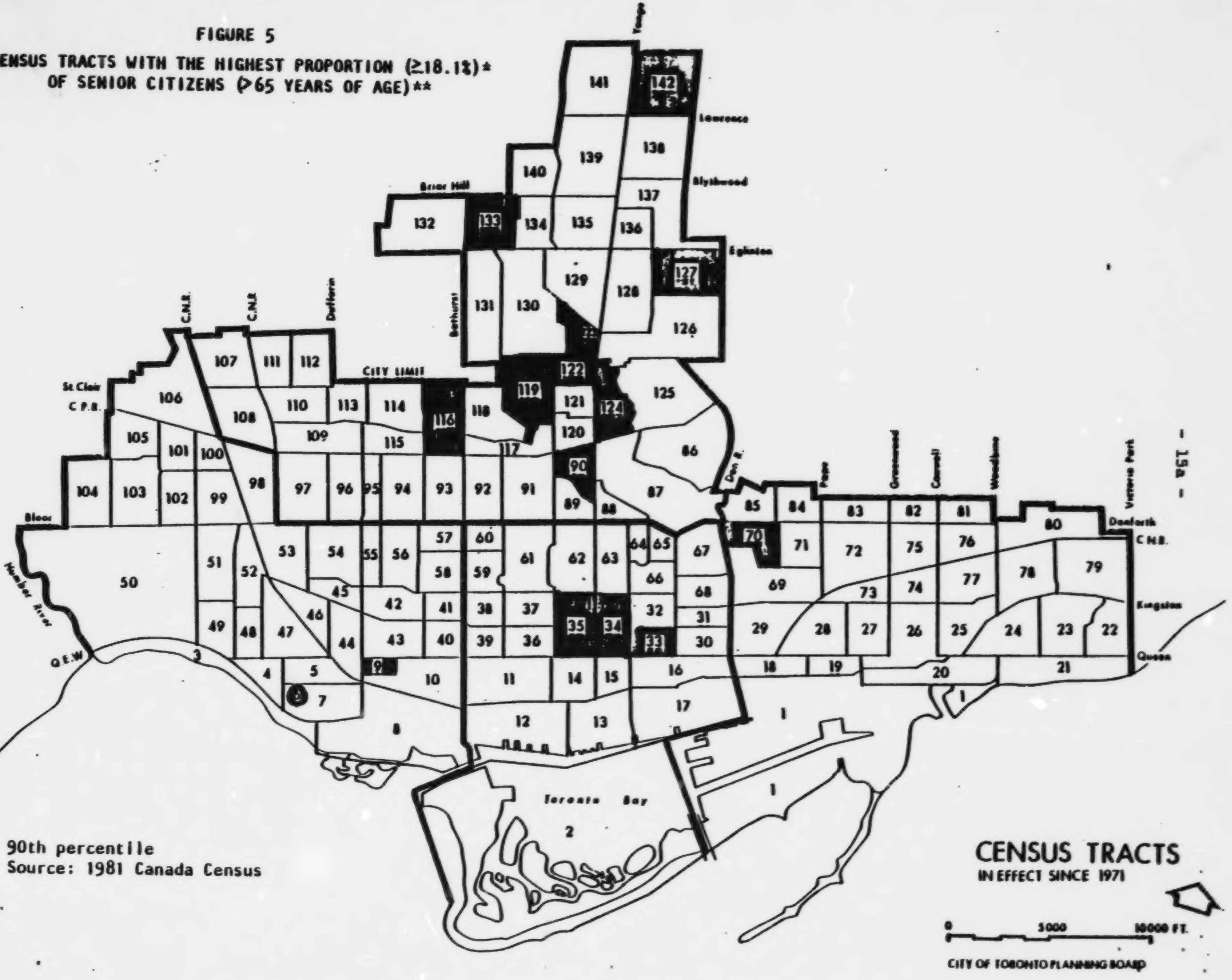
Figure 5 shows the census tracts with 18.1% or more of the population 65 years and older. These census tracts represent the 90th percentile. The majority of the census tracts with high concentrations of the elderly are in the NHA. The WHA has only two census tracts included, but both of these contain institutions for the elderly. Thus, the WHA does not appear to have high concentrations of elderly living in the community. This map confirms what was found in the population pyramids. That is, the NHA has a large concentration of residents over the age of 65.

C. Single Parent Families

The term "single parent family" covers those families which have only one parent of either sex. This parent may be single, divorced or widowed. These data include parents with children of all ages, and not just newborns.

FIGURE 5

CENSUS TRACTS WITH THE HIGHEST PROPORTION (≥18.1%)* OF SENIOR CITIZENS (>65 YEARS OF AGE)**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* 90th percentile
** Source: 1981 Canada Census

In Figure 6 those census tracts with 21.7% or more of the single parent families (the 90th percentile) are darkened in black. The DHA and EHA have the highest concentrations of single parent families. In contrast, the NHA has no high concentration of single parent families, and the WHA has only one census tract in the 90th percentile.

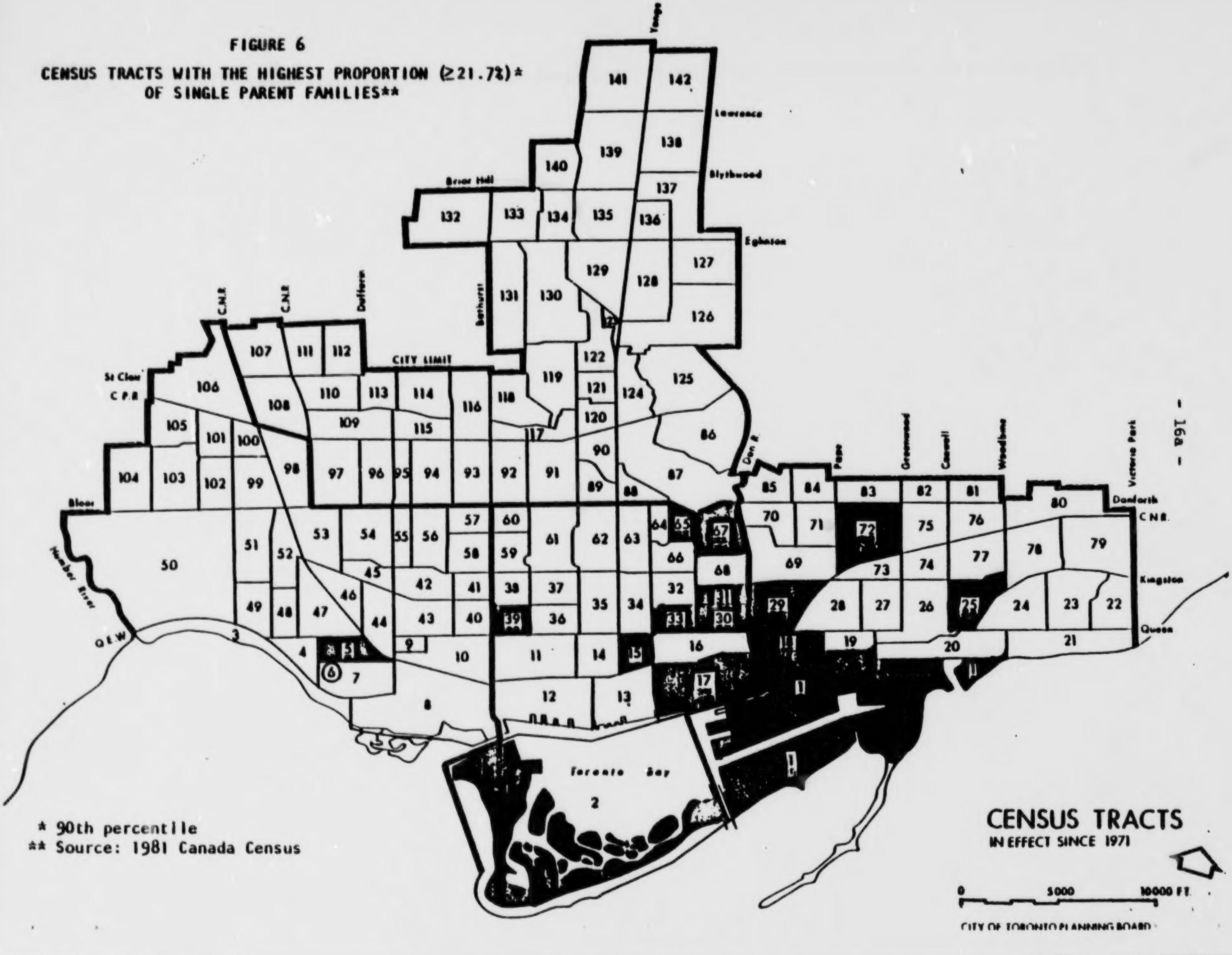
D. Mother Tongue Other Than English

Figure 7 shows the census tracts with the highest proportion of the population with mother tongue other than English; i.e. the first language learned in childhood and still understood by an individual. These data do not identify recent immigrants or those who cannot speak English. The census tracts in the 90th percentile (solid black) and the 75th percentile (solid plus striped black) extend diagonally across the western part of the City. Thus, the highest concentrations are in the WHA and the west end of the NHA. The DHA and the EHA have a few census tracts with a high proportion of mother tongue other than English.

The preliminary data from the 1981 Canadian census allow an examination of the population of each Health Area according to an individual's mother tongue (Table 5 and Figures 8 to 10). According to these data, 62.5% of the City's population had English as its mother tongue. The

FIGURE 6

CENSUS TRACTS WITH THE HIGHEST PROPORTION (≥21.7%)*
OF SINGLE PARENT FAMILIES**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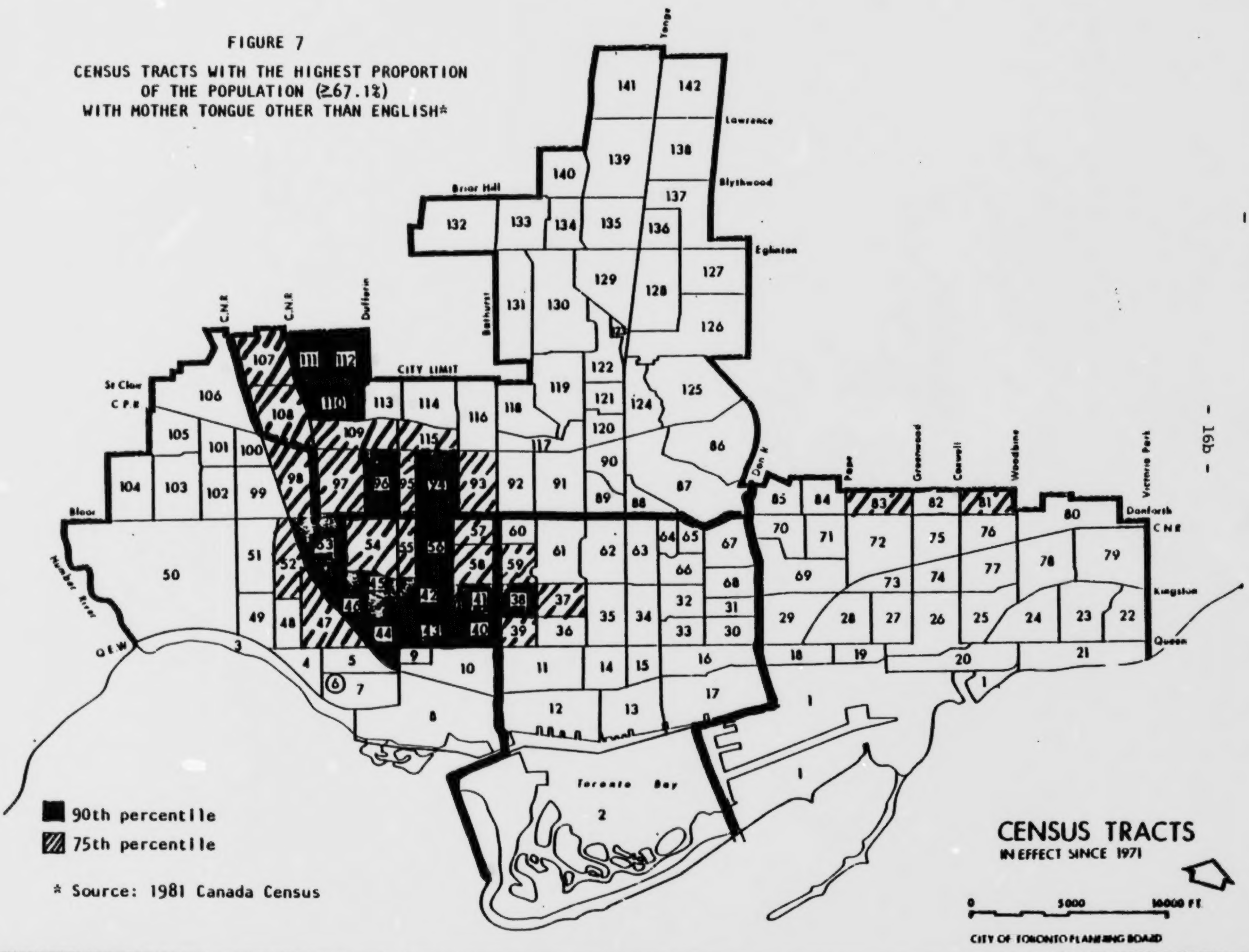
8
2

* 90th percentile
** Source: 1981 Canada Census

FIGURE 7

CENSUS TRACTS WITH THE HIGHEST PROPORTION
OF THE POPULATION (≥67.1%)
WITH MOTHER TONGUE OTHER THAN ENGLISH*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Coxwell
Woodbine
Victoria Park
Danforth
C N R
Kingston
Queen
Toronto Bay

■ 90th percentile
▨ 75th percentile

* Source: 1981 Canada Census

Table 5: 1981 Population of the City of Toronto, by Mother Tongue and Health Area.*

Number Row % + Column % **	WHA	NHA	DHA	EHA	CITY
English	75,120	148,555	58,010	90,445	372,130
	20.2	39.9	15.6	24.3	
	45.7	68.6	66.7	71.0	62.5
French	2,175	3,435	2,425	2,250	10,285
	21.1	33.4	23.6	21.9	
	1.3	1.6	2.9	1.8	1.7
Italian	8,630	21,530	880	5,680	36,720
	23.5	58.6	2.4	15.5	
	5.3	9.9	1.0	4.5	6.2
Portuguese	31,780	12,855	3,410	1,625	49,670
	64.0	25.9	6.8	3.3	
	19.3	5.9	3.9	1.3	8.3
Chinese	4,900	3,435	9,265	10,015	27,615
	17.7	12.4	33.6	36.3	
	3.0	0.9	10.6	7.9	4.6
German	2,995	3,755	1,390	1,845	9,985
	30.0	37.6	13.9	18.5	
	1.8	1.7	1.6	1.4	1.7
Other	38,785	27,035	11,620	15,445	92,885
	41.8	29.1	12.5	16.6	
	23.6	12.5	13.4	12.1	15.6
Total	164,435	216,525	87,025	127,380	595,370
	27.6	36.4	14.6	21.4	100.0

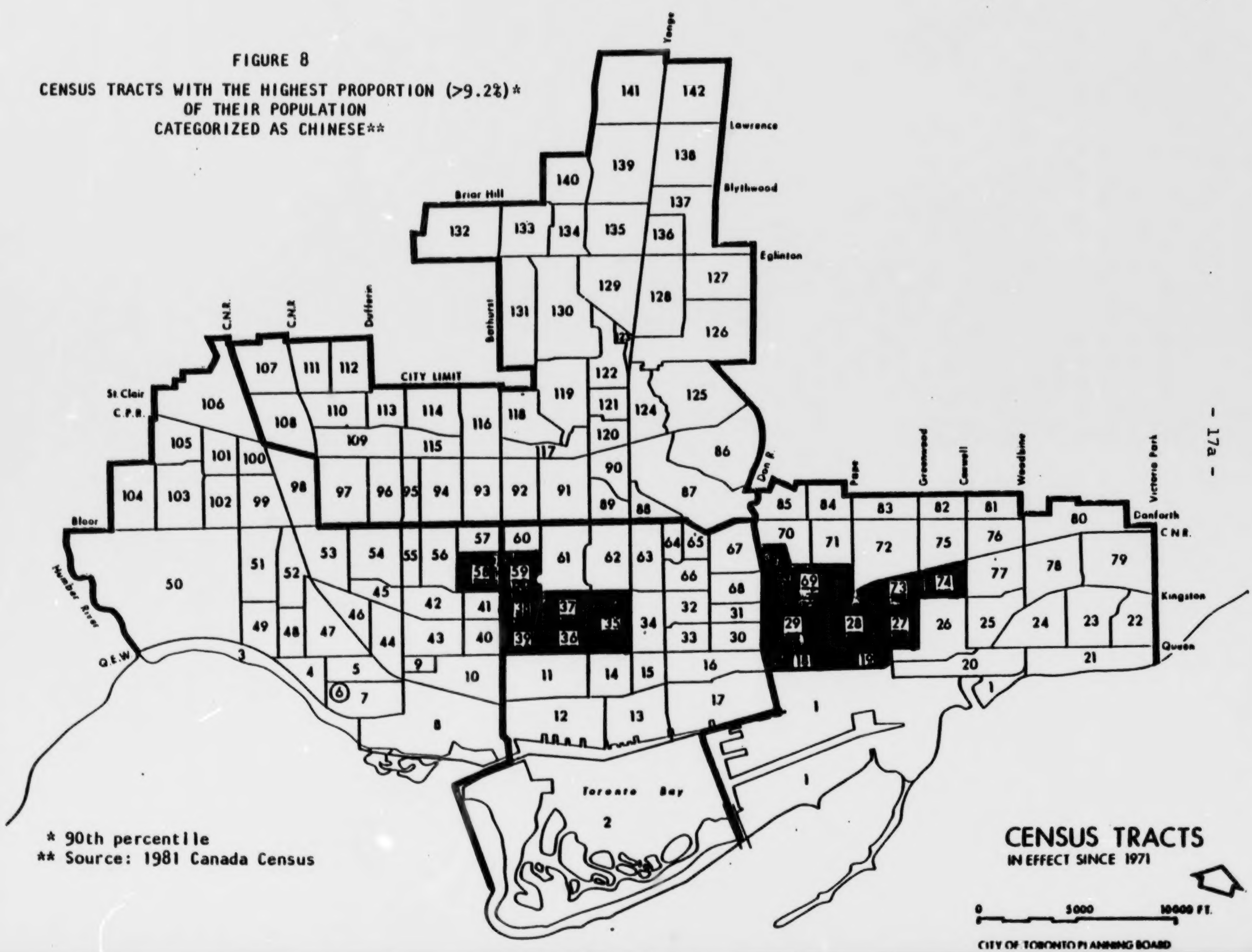
* based on 1981 Canada Census.

+ % of Mother Tongue's population.

** % of Health Area's population.

FIGURE 8

CENSUS TRACTS WITH THE HIGHEST PROPORTION (>9.2%)*
OF THEIR POPULATION
CATEGORIZED AS CHINESE**



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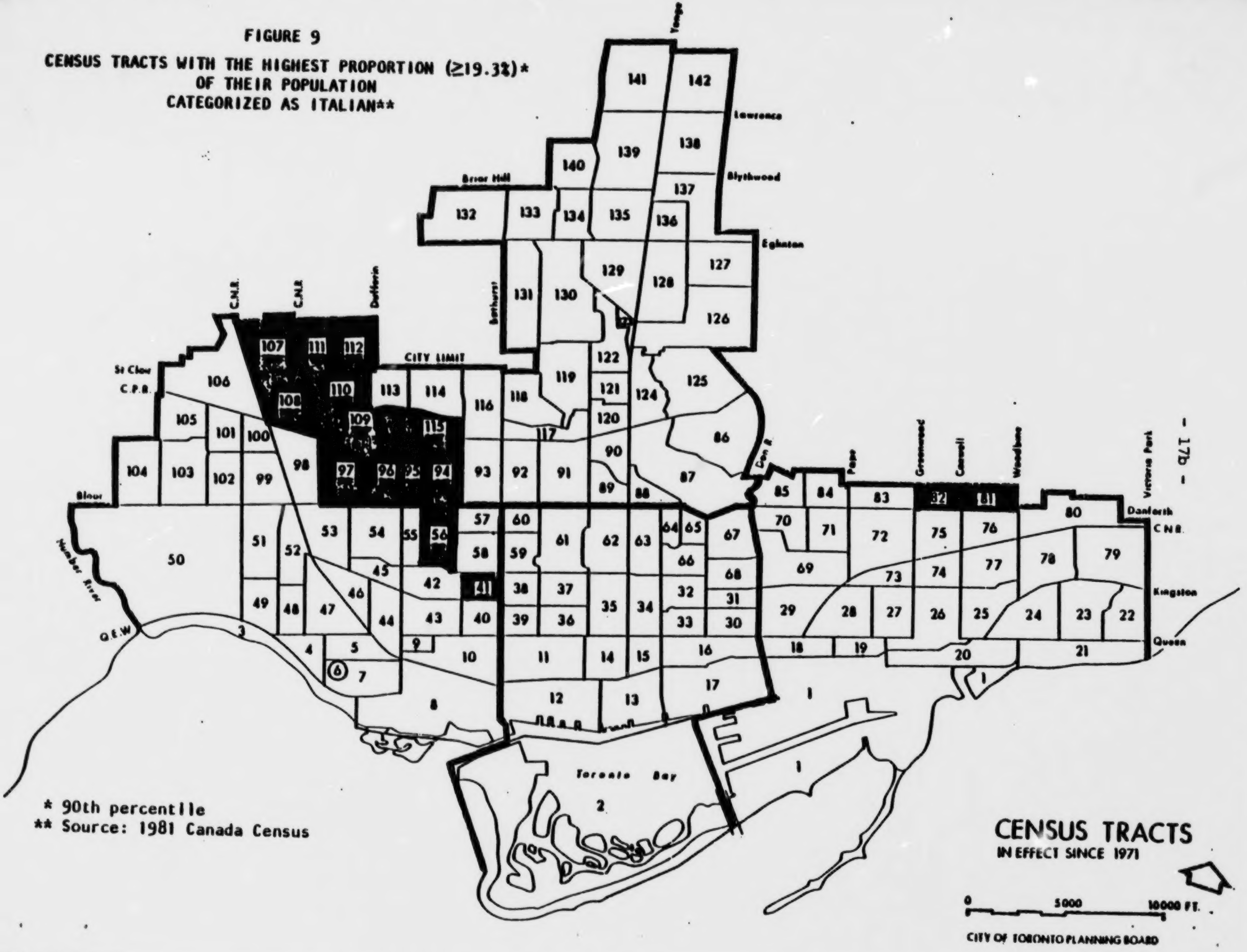
Don R.
Pape
Greenwood
Coxwell
Woodbine
Victoria Park
Danforth
C.N.R.
Kingston
Queen
Toronto Bay

* 90th percentile
** Source: 1981 Canada Census

FIGURE 9

CENSUS TRACTS WITH THE HIGHEST PROPORTION (≥19.3%)* OF THEIR POPULATION CATEGORIZED AS ITALIAN**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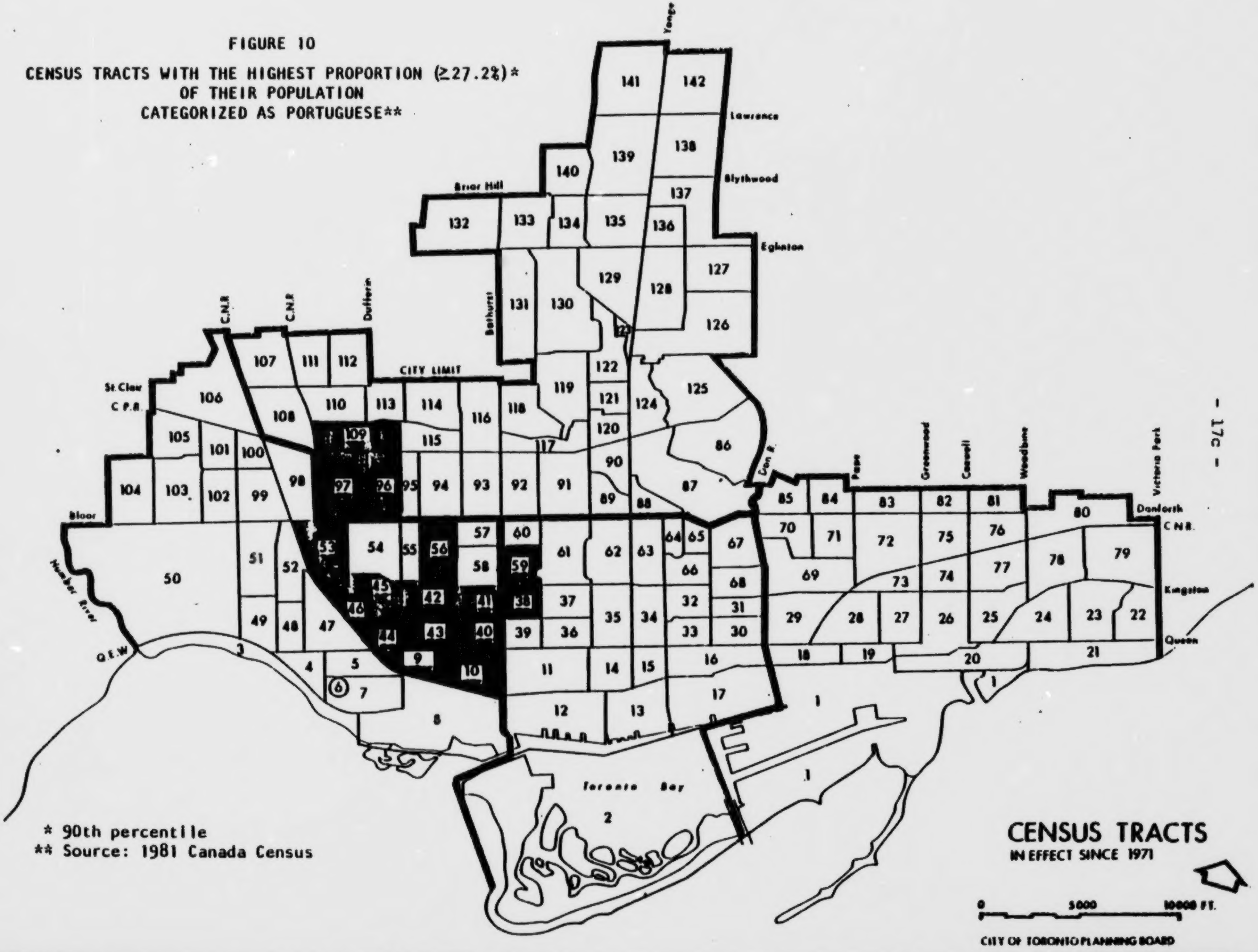
Bloor
Humber River
Q.E.W.
Don R
Pape
Greenwood
Coxwell
Woodbine
Victoria Park
Danforth
C.N.R.
Kingston
Queen
Toronto Bay
CENSUS TRACTS
IN EFFECT SINCE 1971
0
5000
10000 FT.
CITY OF TORONTO PLANNING BOARD

* 90th percentile
** Source: 1981 Canada Census

FIGURE 10

CENSUS TRACTS WITH THE HIGHEST PROPORTION (≥27.2%)*
OF THEIR POPULATION
CATEGORIZED AS PORTUGUESE**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* 90th percentile
** Source: 1981 Canada Census

WHA had the lowest percent with English as a mother tongue (45.7%), and the EHA had the highest (71.0%). In 1981, almost 70% of the population which had Chinese as a mother tongue were located in the Downtown and Eastern Health Areas. Figure 8 shows that there are two distinct clusterings of census tracts with a high percent of residents with Chinese as a mother tongue. These are in the DHA and EHA.

The Italian mother tongue population is found primarily in the NHA (58.6%). As Figure 9 shows, the census tracts with the highest proportion of the population with Italian as the mother tongue are found in the west end of the NHA.

64.0% of the population whose mother tongue is Portuguese are in the WHA. The darkened census tracts in Figure 10 indicate that the Portuguese speaking population is found in the central portion of the WHA.

IV. NATALITY

A. Introduction

A major emphasis for the Toronto Department of Public Health is on family planning and pre- and post-natal programs. For this reason, it is important to analyze natality data on abortions, stillbirths, and live births. Infant mortality, also related to these programs, will be discussed in the section on mortality.

B. Abortion

The data on abortions are provided to the Department of Public Health by the Ministry of Health. These data are analyzed for the City as a whole and cannot be disaggregated into the four Health Areas at present.

In 1981 there were 8,313 abortions attributed to the City of Toronto. This is likely an overcount, since a borough resident may report her address as Toronto. From Table 6 it can be seen that in 1981 the 20 to 24 year old age group had the highest number of abortions (2,708) and the highest abortion rate (88.9 per 1,000 women) in the City. In contrast to this, the highest fertility rate was 73.3 per 1,000 women in the 30 to 34 year old age group. For women younger than 25 or older than 39, the abortion rate was greater than the fertility rate. Abortions seem to

Table 6: Comparison of Live Births and Abortions in the City of Toronto, in 1981, by Age of Mother.

Age Group	Births	Abortions	Abortion as a % of Abortion and Live Births	Fertility Rate+	Abortion Rate+	Abortion/ Live Births (ratio)
10-14	6	31	83.8	0.3	1.8	5.2
15-19	585	1491	71.8	28.5	72.7	2.6
20-24	1800	2708	60.1	59.1	88.9	1.5
25-29	2398	2065	46.3	72.8	62.7	0.9
30-34	2097	1266	37.6	73.3	44.3	0.6
35-39	603	582	49.1	28.7	27.7	1.0
40-44	91	156	63.2	5.4	9.3	1.7
45-49	10	14	58.3	0.6	0.9	1.4
Totals	7590*	8313	52.3	41.4	45.3	1.1

* no information on age of mother for 7 live births.

+ per 1,000 women in that age group.

be concentrated in the younger end of the age spectrum and births in the middle portion (Figure 11). In addition, there were more than five times as many births as abortions in the 10-14 year olds, although numbers are small. While the ratio between abortions and live births for women 45-49 was 1.4/1, 25-29 year olds had about equal numbers of abortions and live births.

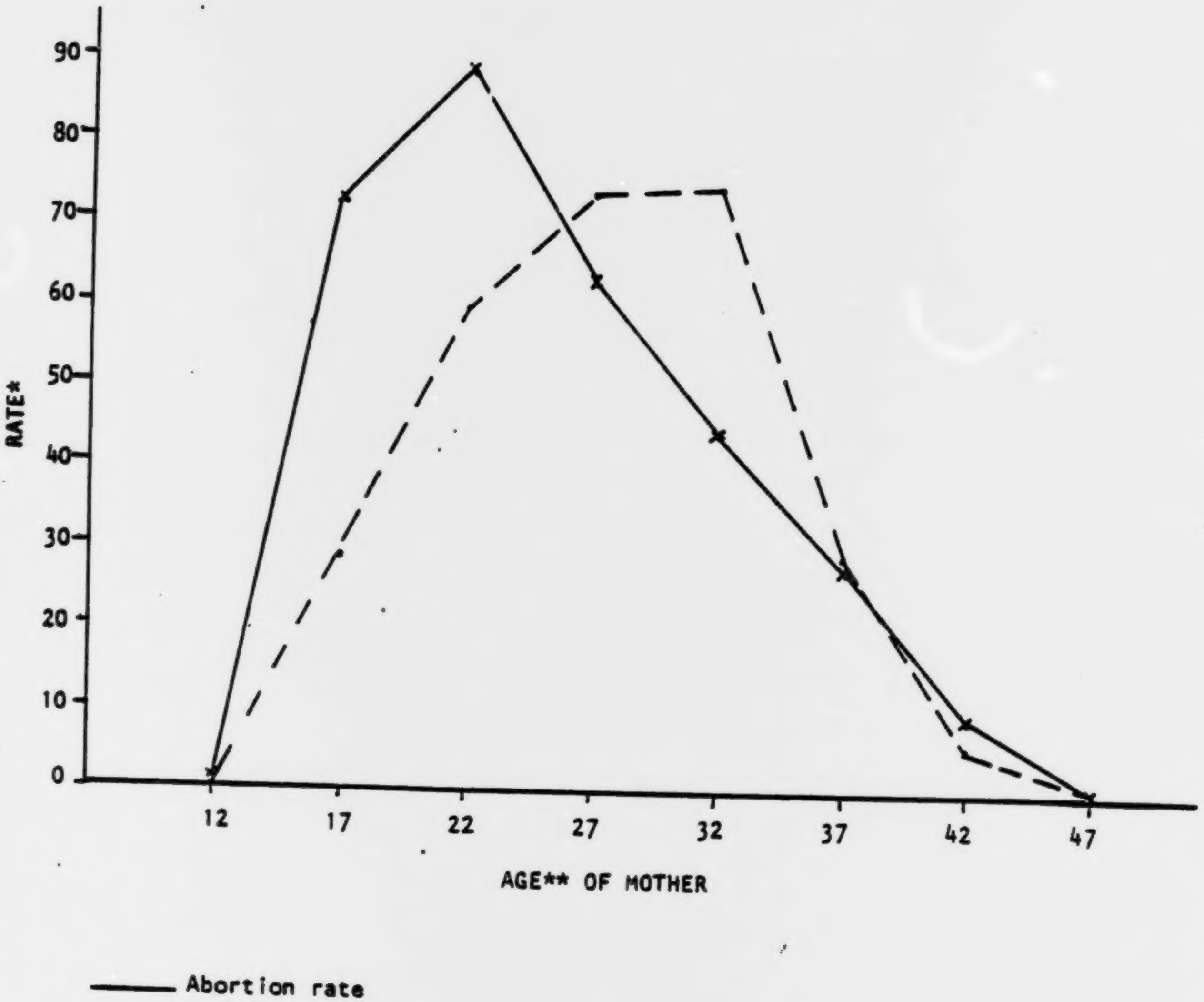
As Table 7 shows, the profile of abortions according to mother's marital status was the same for Ontario and Toronto. In Toronto single women accounted for 63% of abortions and married women for only 27.8%. A major proportion of abortions were to single women under the age of 25 (42.0%) (Table 8). Only 9.1% of the abortions in the City were to women 35 and over.

Over the past seven years there has been a steady increase in the age-specific abortion rates (Figure 12). The greatest increase can be seen in the 20 to 24 year old age group. This group consistently has had the highest abortion rates over the past seven years. Not only has the 40-49 year old age group had the lowest rates, but the rates have not increased since 1975.

On the other hand, abortion rates of teens have almost doubled in the past seven years. At the same time the

FIGURE 11

AGE-SPECIFIC ABORTION AND FERTILITY RATES*
IN THE CITY OF TORONTO
1981



──── Abortion rate
------ Fertility rate

* Per 1,000 women

** Midpoint of age group

Table 7: Comparison of 1981 Abortion and Marital Status in Residents of the City of Toronto and Ontario.

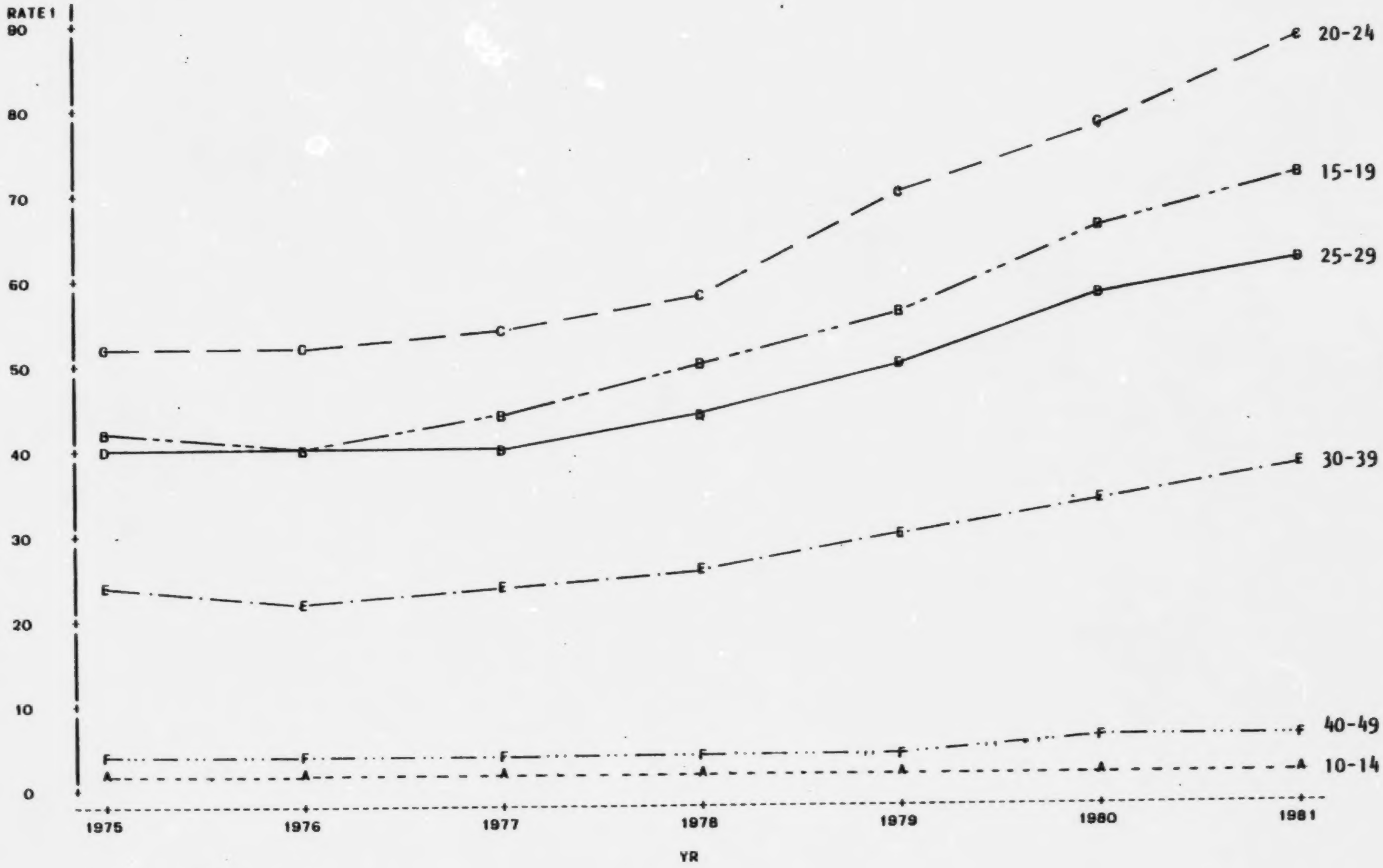
	Toronto		Ontario	
Marital Status	Number	%	Number	%
Single	5,246	63.1	19,422	63.9
Married	2,310	27.8	7,740	25.5
Separated	457	5.5	1,937	6.4
Divorced	198	2.4	797	2.6
Widowed	20	0.2	108	0.36
Common Law	82	1.0	386	1.3
Unknown	0	0.0	1	0.003
Total	8,313	100.0	30,391	100.0

Table 8: Number of Abortions to Residents of the City of Toronto in 1981, by Age and Marital Status of the Mother.

Age Group	Single	Married	Separated	Divorced	Widowed	Common Law	Total	% of City
10-14	31	0	0	0	0	0	31	0.4
15-19	1414	58	8	0	0	11	1491	17.9
20-24	2049	474	130	20	2	33	2708	32.6
25-29	1059	763	163	56	5	19	2065	24.8
30-34	492	584	104	69	4	13	1266	15.2
35-39	172	322	37	39	6	6	582	7.0
40-44	28	99	13	14	2	0	156	1.9
45-49	1	10	2	0	1	0	14	0.2
Total	5246	2310	457	198	20	82	8313	
% of City	63.1	27.8	5.5	2.4	0.2	1.0	100.0	

FIGURE 12

AGE-SPECIFIC ABORTION RATES*
IN THE CITY OF TORONTO
1975 - 1981



* Per 1,000 population

birth rate has decreased, leveling off in the last few years (Figure 13). It appears that the problem of teenage pregnancies has remained fairly constant from 1975 to 1979. Since 1979 there has been an increase in the teenage pregnancy rate, based on abortions and live births combined.

C. Stillbirths

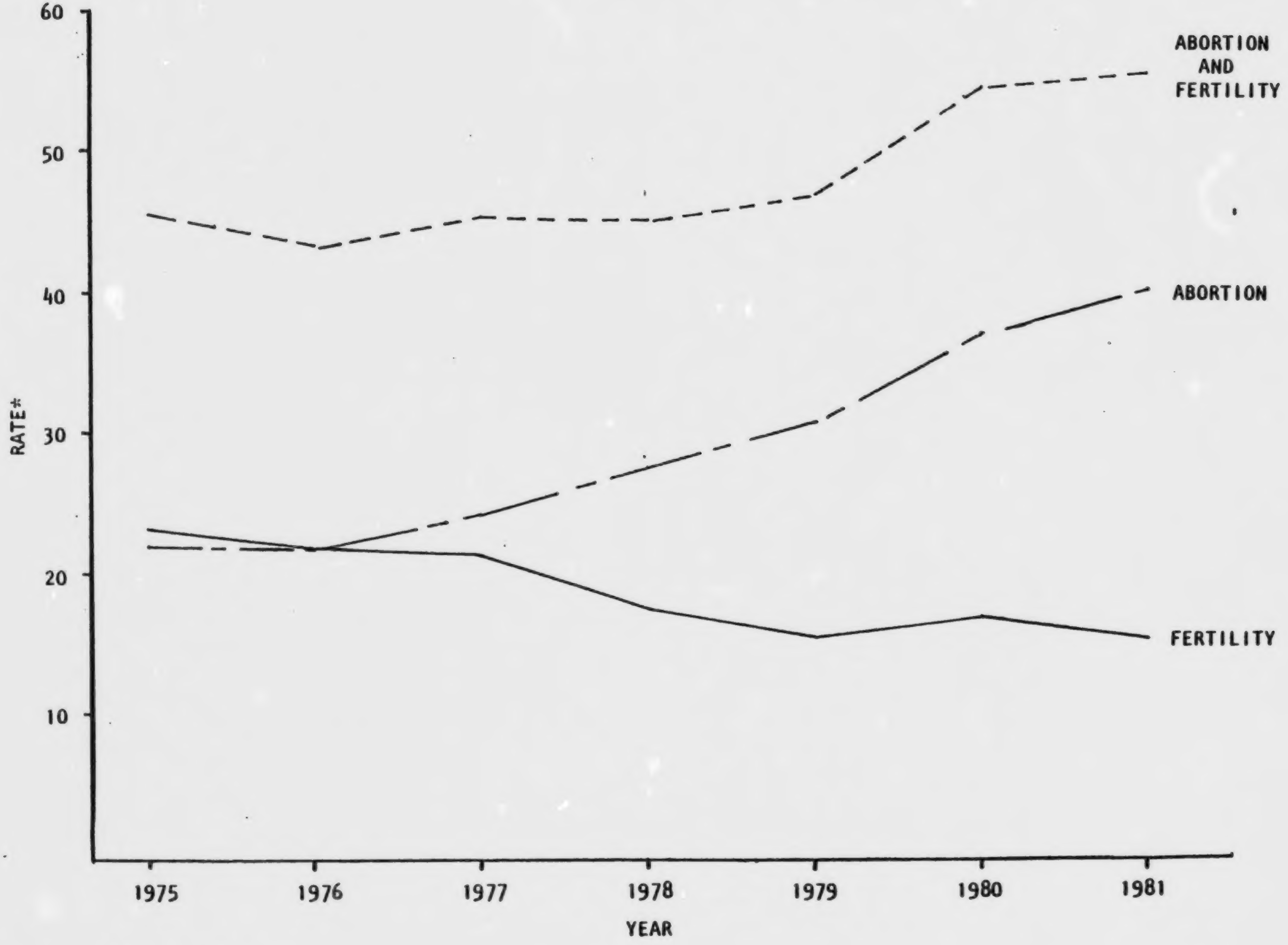
In 1981, there were 50 stillbirths among City of Toronto residents, giving a stillbirth rate of 6.6 per 1,000 live births. There has been a steady decline in the stillbirth rate over the past 10 years (Figure 14).

Figure 15 and Table 9 show the distribution of stillbirths across the City in 1980 and 1981 combined. Based on the data for these two years, there appears to be no clustering of stillbirths. The rates for the Health Areas do not vary greatly, and there are no concentrations of stillbirths throughout the City.

Stillbirths in the City of Toronto appear to vary according to age of the mother (Table 10). The highest proportion occurred in the 30-34 year old age group, but the highest rate (which takes into account the number of births among the group) was in the 40 year olds and over (15.3 per 1,000 live births).

FIGURE 13

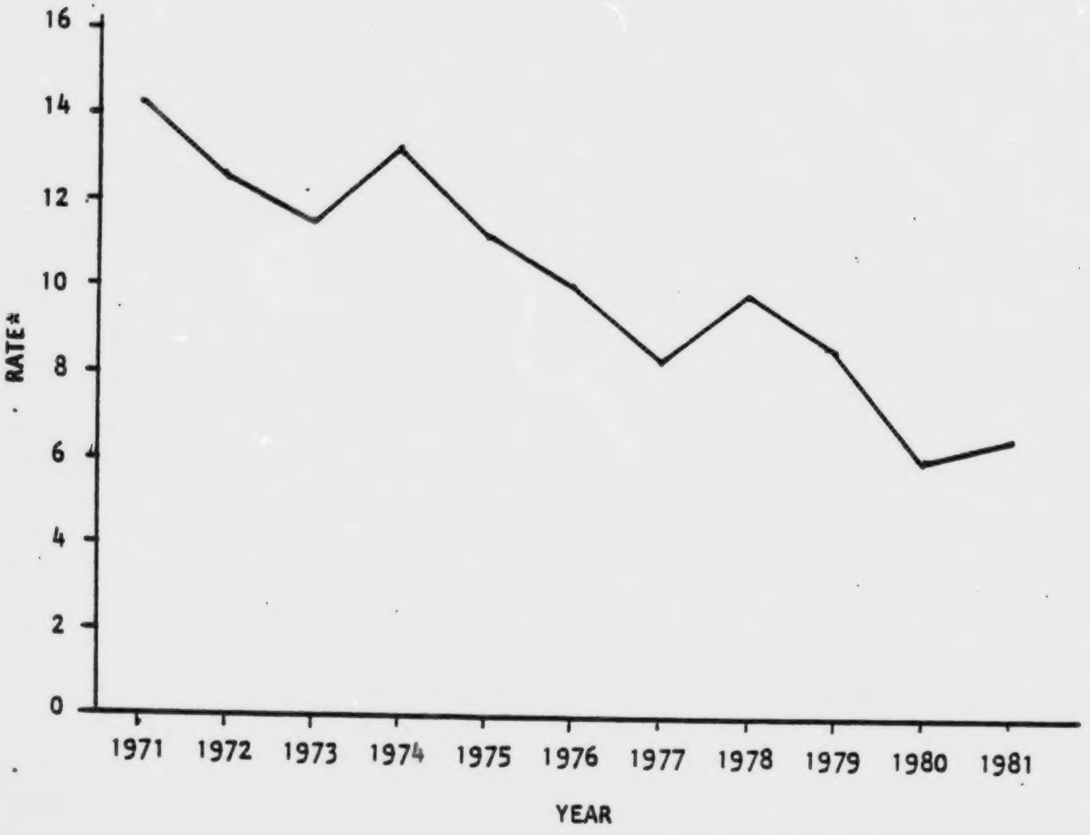
ABORTION AND FERTILITY RATES*, 10-19 YEAR OLDS
1975 - 1981



* Per 1,000 women

FIGURE 14

STILLBIRTH RATE*IN THE CITY OF TORONTO
1971 - 1981



* Per 1,000 live births

FIGURE 15

STILLBIRTHS IN THE CITY OF TORONTO
1980 AND 1981 COMBINED

(Census tract boundaries removed)

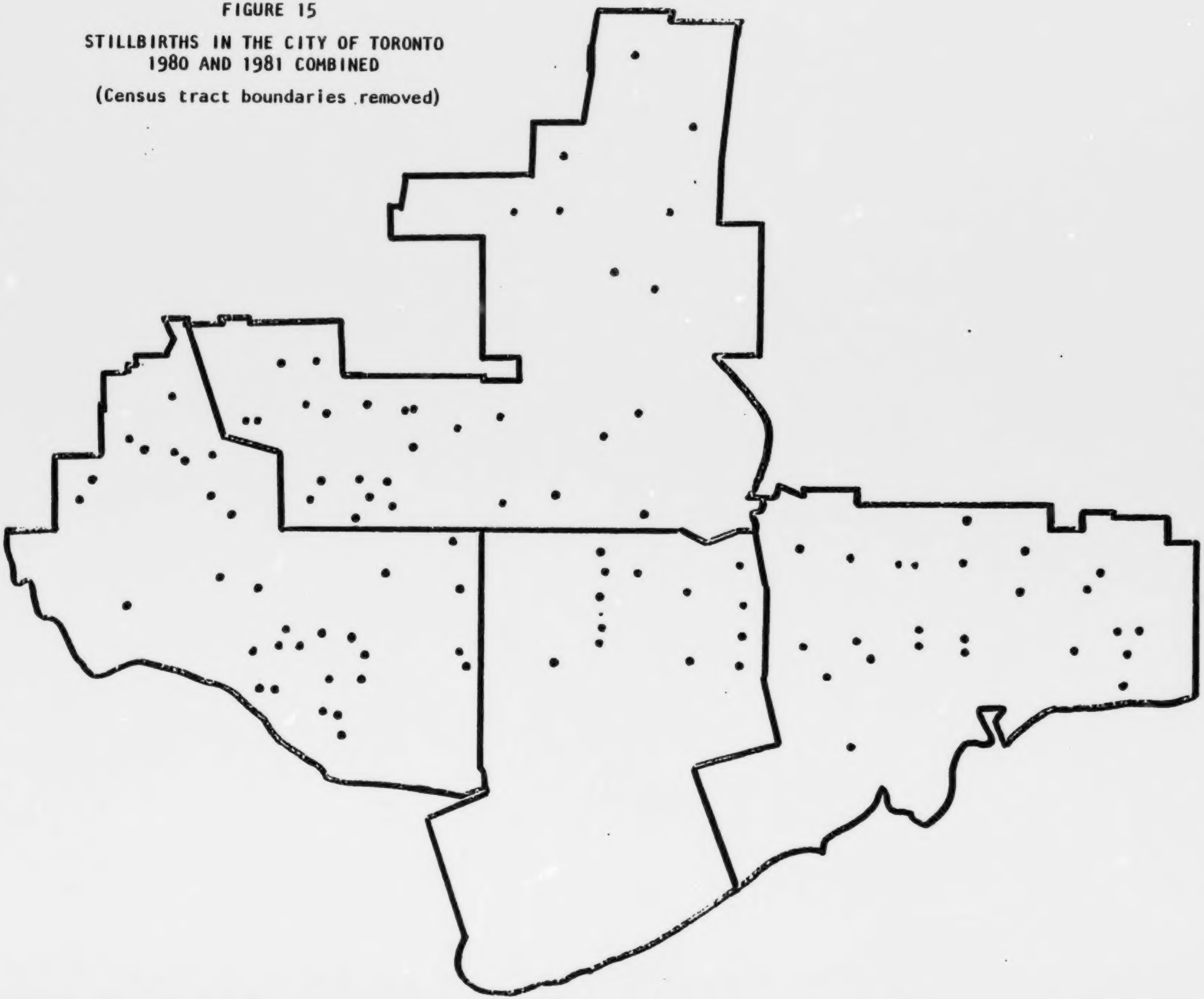


Table 9: Stillbirth Rates* for the Health Areas in the City of Toronto, 1980 and 1981 Combined.

Health Area	No. Stillbirths	Rate
WHA	32	6.31
NHA	32	6.62
DHA	13	6.32
EHA	24	6.42
City	101+	6.43

* per 1,000 live births..

+ 5 missing values.

Table 10: 1980 and 1981 Stillbirths, in Toronto, by Age of Mother and Health Area.

Age of Mother	WHA	NHA	DHA	EHA	City	% of City Total	Rate*
15-19	3	1	0	6	10	9.9	7.9
20-24	5	3	4	6	18	17.8	4.8
25-29	10	8	5	6	29	28.7	5.8
30-34	11	13	3	5	32	31.7	7.6
35-39	3	5	0	1	9	8.9	7.2
40+	0	2	1	0	3	3.0	15.3
Total	32	32	13	24	101+	100.0	6.4
% of City Total	81.7	31.7	12.9	23.8			

* number of stillbirths per 1,000 livebirths.

+ 5 missing values.

D. Number of Live Births

In 1981, 7,597 live births occurred to City of Toronto residents. The WHA accounted for the largest proportion of births (31.5%), and the DHA the smallest (13.8%) (Table 11).

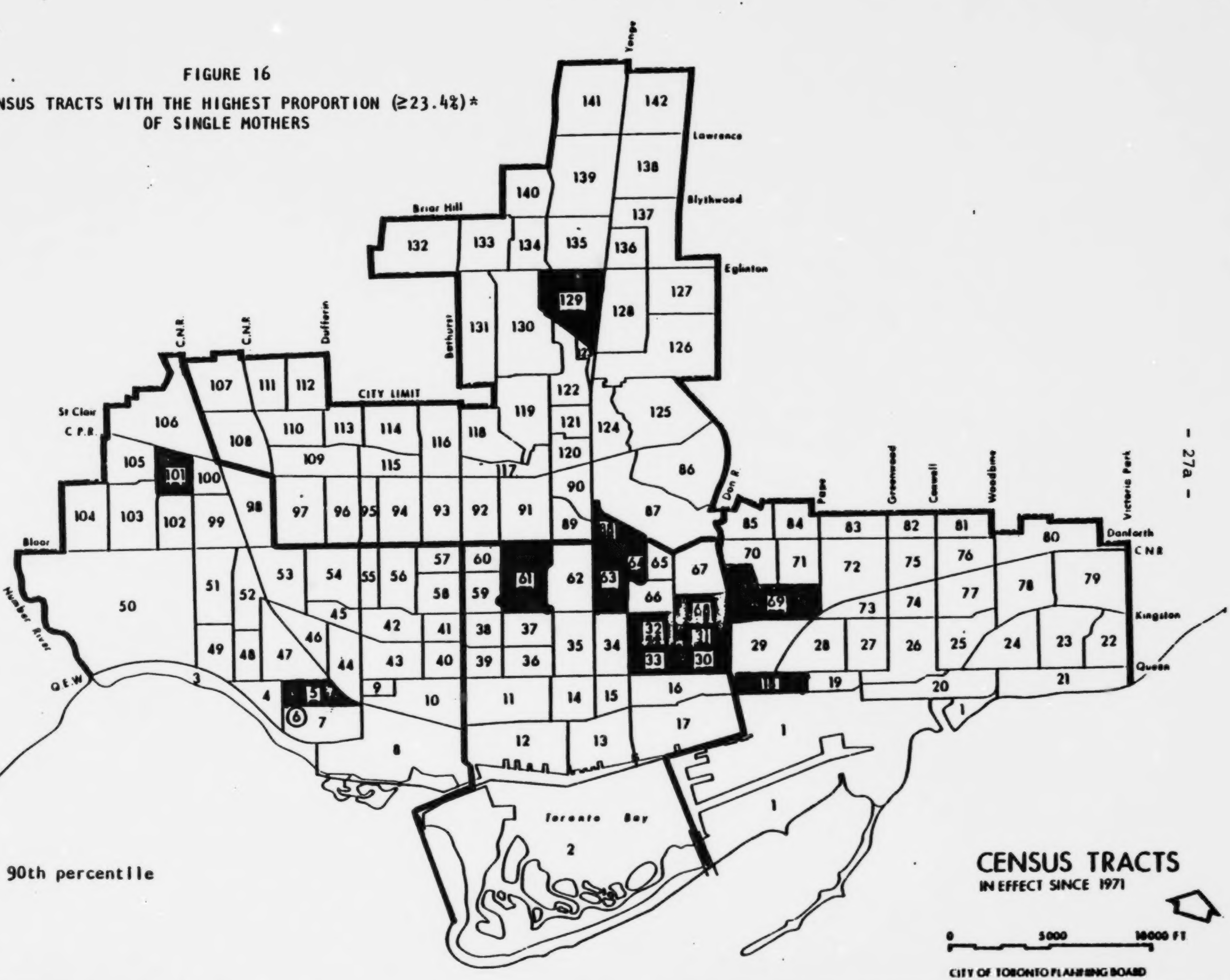
It is interesting to note that the profile of marital status appears to be dependent on Health Area (when using a Chi-squared test of independence, $p<0.0001$) (1). A further test of proportion revealed a significantly higher proportion of births to single women in the DHA versus the city as a whole (ie. 20.6% versus 12.5%). The NHA, on the other hand, had a single mother proportion of 9.1, and this is significantly lower than the proportion for the City ($p<0.001$).

These numbers are substantiated in Figure 16. Many of the census tracts in the Downtown and Eastern Health Areas had high proportions of single mothers (23.4% or more). Over half of these census tracts are found in the DHA, with the rest scattered throughout the rest of the City.

According to Table 12, the largest number of births were to women 25 to 29 years old, except in the NHA. There the 30 to 34 year old age group had the largest number.

FIGURE 16

CENSUS TRACTS WITH THE HIGHEST PROPORTION (≥23.4%)* OF SINGLE MOTHERS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CENSUS TRACTS
IN EFFECT SINCE 1971
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2

* 90th percentile

Table 11: Number of Live Births to City of Toronto Residents, By Marital Status and Health Area, 1981.

Marital	WHA		NHA		DHA		EHA		CITY	
Status	No.	%	No.	%	No.	%	No.	%	No.	%
Single	254	10.6	209	9.1*	215	20.6*	267	14.4	945	12.5*
Married	2119	88.8	2069	90.2	815	78.0	1566	84.3	6569	86.6
Widowed	1	0.04	2	0.1	3	0.3	3	0.2	9	0.1
Divorced	13	0.5	13	0.6	12	1.1	22	1.2	60	0.8
Total	2387		2293		1045		1858		7583+	100.0
% All Births	31.5		30.2		13.8		24.5		100.0	

* the difference between the Health Area and the City is statistically significant (p<0.001).

+ 14 missing values.

Table 12: Number of Live Births to Residents of the City of Toronto and its Health Areas, by Age of Mother, 1981.

Age of Mother	WHA	NHA	DHA	EHA	City
Less than 15	1	1	1	3	6
15-19	207	112	107	159	585
20-24	663	444	255	438	1,800
25-29	726	717	320	635	2,398
30-34	587	748	264	498	2,097
35-39	166	233	87	117	603
40-44	30	37	12	12	91
45 plus	7	2	0	1	10
Total	2,387	2,294	1,046	1,863	7,590*

* 7 missing values.

These numbers, however, do not take into account the different population sizes and different age structures of the four Health Areas. Therefore, before any comparison of the Health Areas is done, the fertility rates should be examined.

E. Fertility Rates

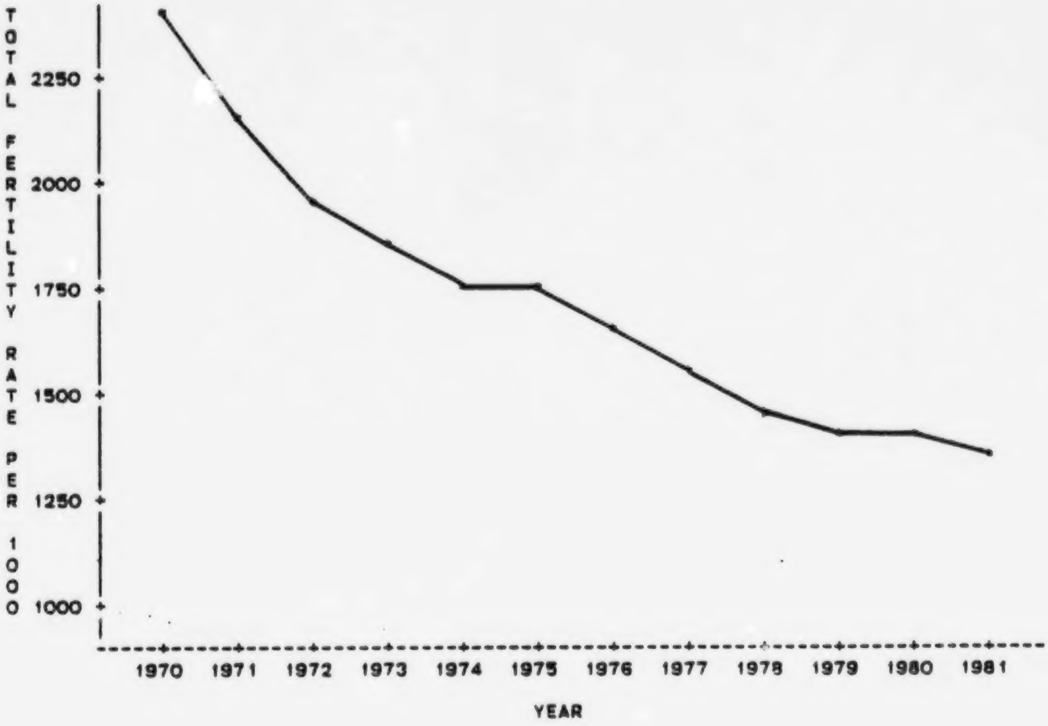
Over the past ten years there has been a steady decline in the total fertility rate (TFR) for the City of Toronto (Figure 17). The TFR indicates the number of children born per 1,000 women, based on the 1981 age-specific fertility pattern of women during their reproductive years (2). A TFR of 2,000 births per 1,000 women indicates that the population is replacing itself. The City of Toronto's TFR has been lower than 2,000 since 1972. In 1981 the TFR was 1344.4 births per 1,000 women.

Birth data only have been collected at the census tract level since 1979, and therefore it was not possible to look at long-term trends in area-specific TFR's. Table 13, however, presents the 1981 TFR's for the Health Areas and the City.

The EHA and WHA have the highest TFR's. The population pyramids for these two areas, presented earlier, demonstrated that the major relative proportion of their

FIGURE 17

TOTAL FERTILITY RATE* IN TORONTO
1970 - 1981



* Per 1,000 women, age 10-49

Table 13: 1981 Total Fertility Rate (TFR)* and Net Reproduction Rate (NRR) for Residents of the City of Toronto and its Health Areas.

Health Area	TFR	NRR
WHA	1,667.8	0.77
NHA	1,070.2	0.49
DHA	1,105.1	0.50
EHA	1,717.0	0.81
City	1,344.4	0.62

* per 1,000 female population, age 10-49.

populations are under the age of 34. This, along with the TFR's, suggest that the WHA and EHA have many young families. It should be noted that all of the Health Areas have TFR's which are under 2,000.

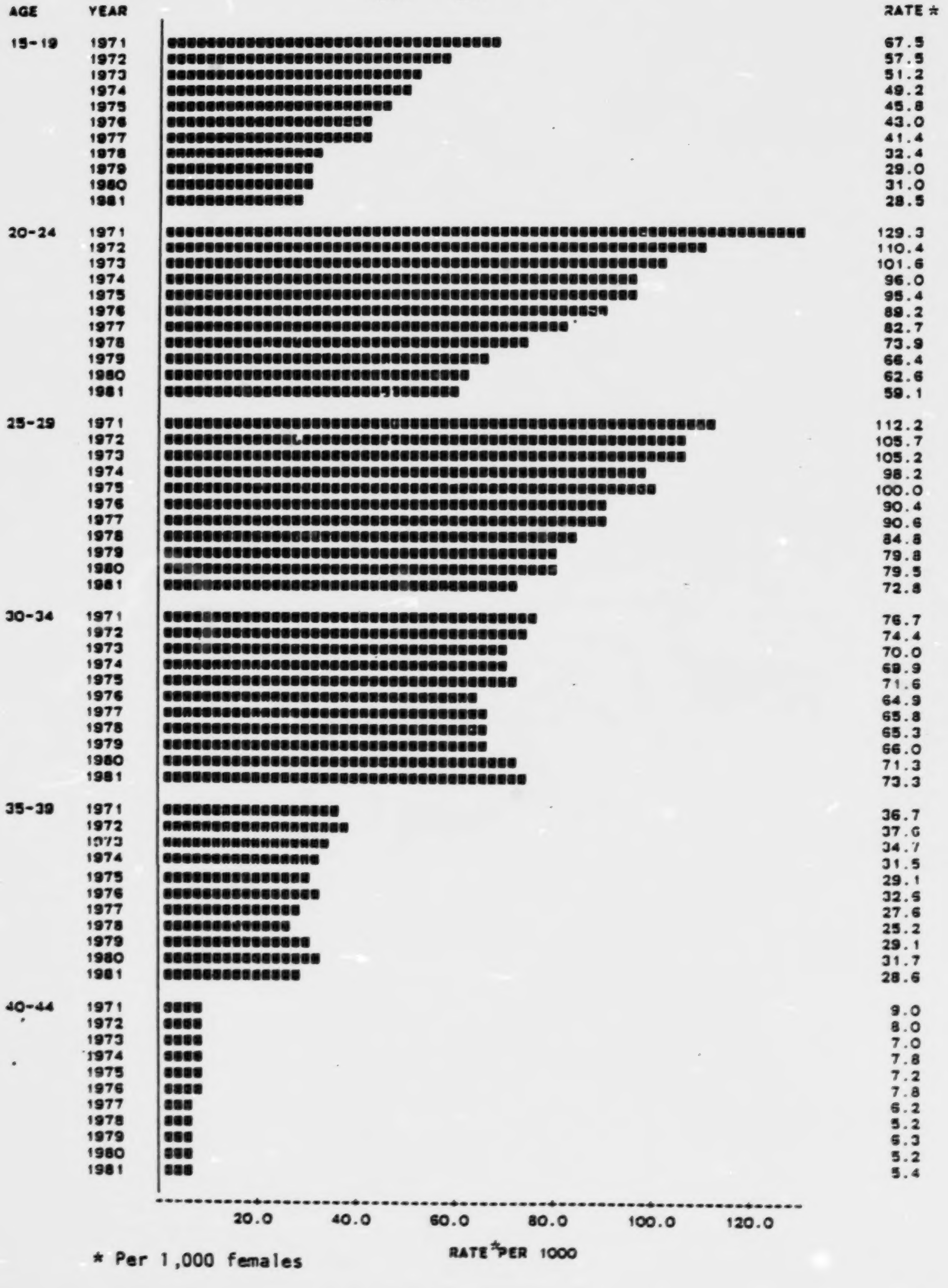
Another measure of population growth is the Net Reproductive Rate (NRR) (4). The NRR calculates the number of daughters a cohort of baby girls will have during its reproductive lifespan if the 1981 age-specific fertility and mortality patterns are experienced. An NRR of 1.0 means that the population is replacing itself. The NRR for the City of Toronto and the Health Areas are all less than 1.0. The NHA had the lowest NRR, while the highest was in the EHA.

As was seen with the TFR, the age-specific fertility rates (Figure 18) have been decreasing in most age groups since 1971. The 30 to 39 year old age groups, however, are showing a slight increase in fertility rates over the past few years. Figure 19 shows that the number of first births to women over 30 is increasing. This supports what is seen above, and suggests that women are having children at a later age. This will have an impact on program planning, since the potential health problems associated with pregnancy vary with age.

Figure 20 presents the age-specific fertility rates (number of live births per 1,000 women in that specific

FIGURE 18

AGE-SPECIFIC FERTILITY RATES*
CITY OF TORONTO
1970 - 1981



* Per 1,000 females

FIGURE 19

PERCENT OF FIRST BIRTHS
FOR MOTHERS LESS THAN 20 AND GREATER THAN OR EQUAL TO 30
1970 - 1981

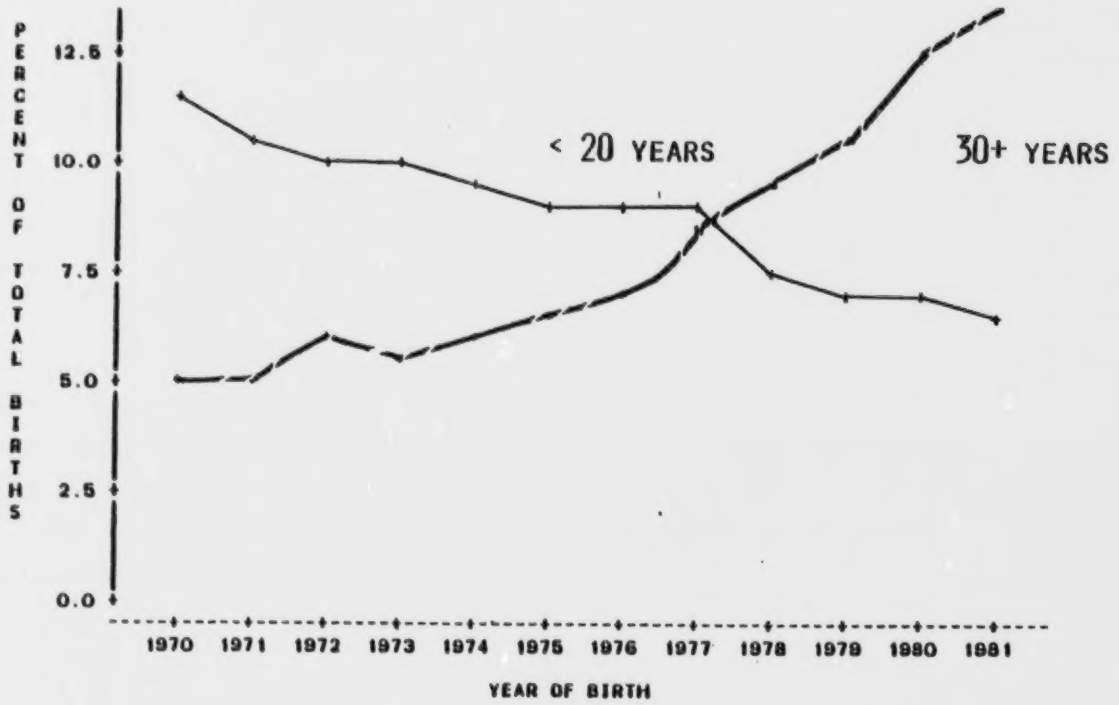
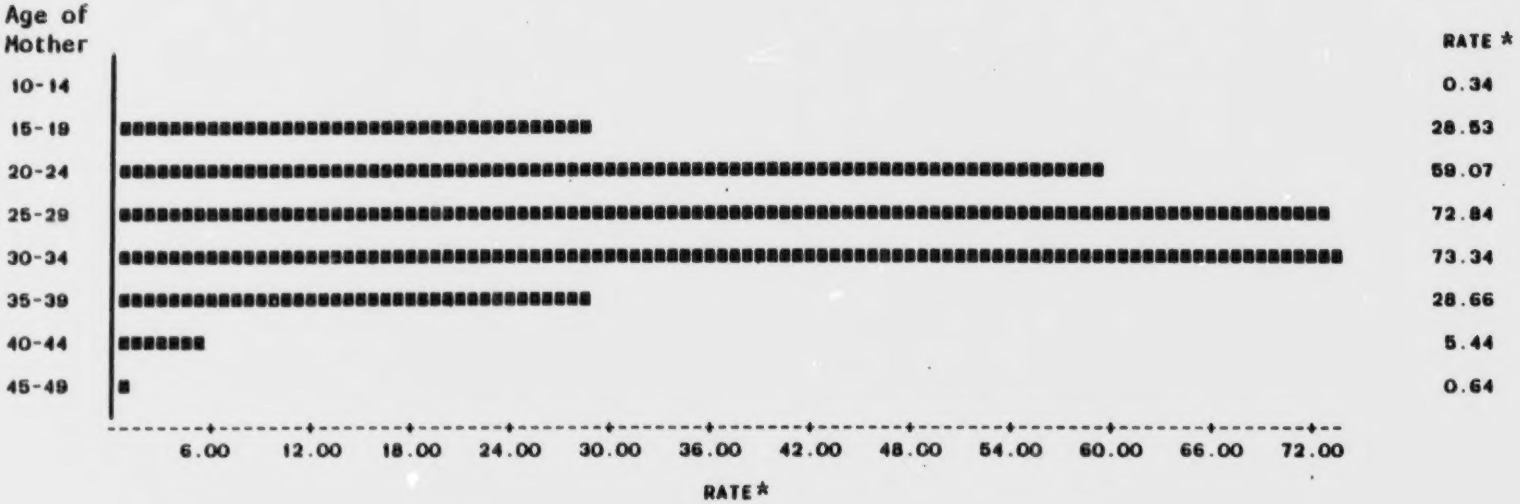


FIGURE 20

AGE-SPECIFIC FERTILITY RATES*
CITY OF TORONTO
1981



* Per 1,000 women

age group) for the City. It can be seen that the fertility rates peaked in the 30 to 34 year old age group for the City, with the 25 to 29 year old age group a very close second.

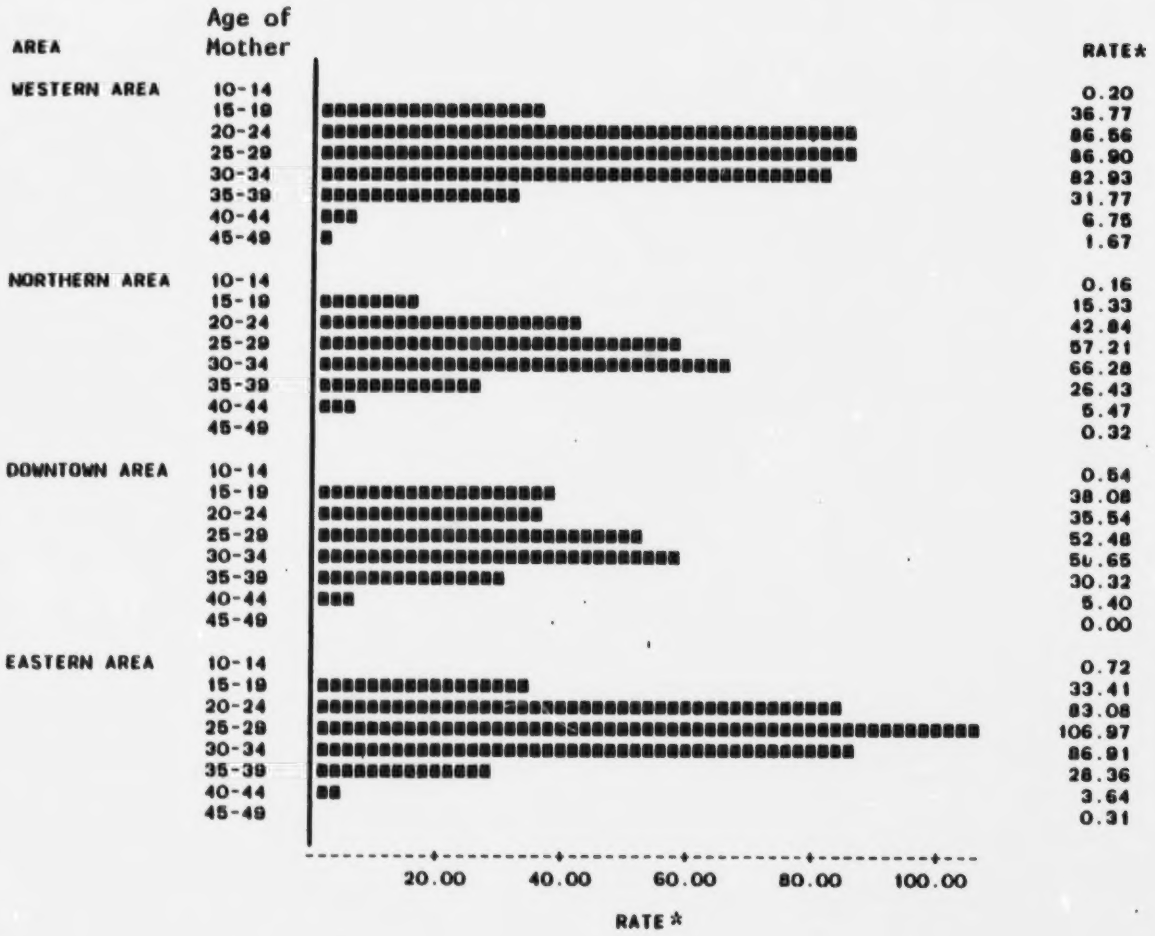
The 1981 age-specific fertility rates for the Health Areas are shown in Figures 21 and 22. The highest rates were found in the Eastern and Western Health Areas, between the ages of 20 and 34. It can be seen in Figure 22 that the DHA had the highest fertility rate for the 15 to 19 year old age group (38.08 births per 1,000 women), closely followed by the WHA (36.77 per 1,000). The WHA also had the highest fertility rate in the oldest age group (1.67 births per 1,000 women age 45-49). This rate, however, was accounted for by only seven births.

F. Prematurity - Gestational Age and Birthweight

Based on data extracted from birth certificates, the newborn infant can be classified on the basis of gestational age and birthweight. Since the level of the organ system's maturity primarily is determined by gestational age, a gestational age of less than 37 weeks can be defined as premature. However, due to inaccuracies in determining gestational age, many health professionals use low birthweight (less than 2,500 grams) as a measure of prematurity. We will consider both

FIGURE 21

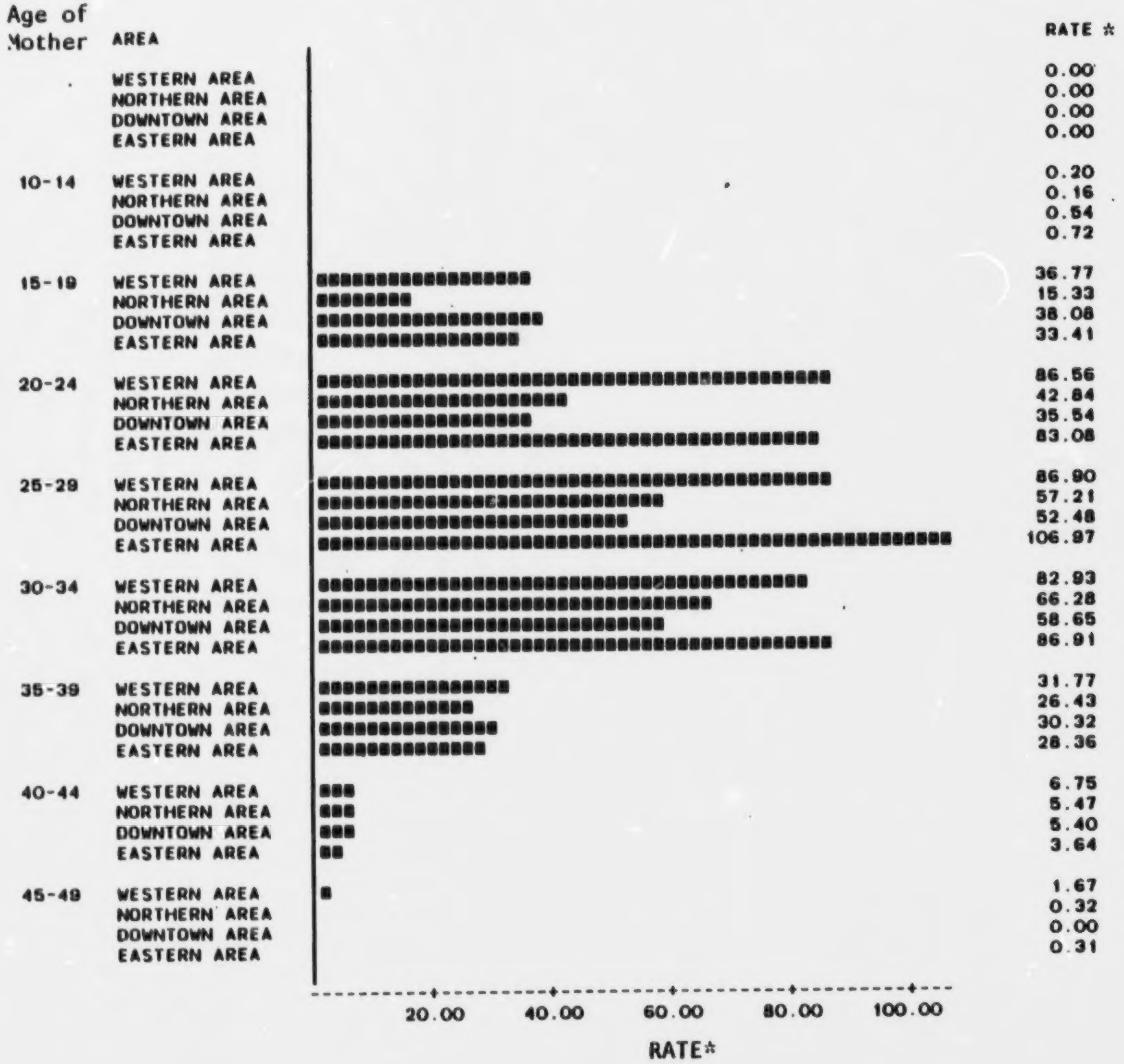
AGE-SPECIFIC FERTILITY RATES*
BY HEALTH AREA
CITY OF TORONTO
1981



* Per 1,000 women

FIGURE 22

AGE-SPECIFIC FERTILITY RATES*
BY HEALTH AREA
CITY OF TORONTO
1981



* Per 1,000 women

gestational age and birthweight in the discussion on prematurity.

Gestational age can be separated into three categories: 1) premature, or less than 37 weeks gestation; 2) full-term; and 3) postmature, greater than 42 weeks gestation. Both the premature and postmature category have potential health problems for the infant.

As Table 14 shows, 92.4% of all live births in the City of Toronto were full-term as defined by gestational age. The EHA had the highest proportion of births in both the premature and postmature categories (7.6% and 1.2% respectively) compared to the other Health Areas, although differences were not statistically significant. The lowest proportion of premature births was in the NHA (5.8%), and the WHA had the lowest proportion of postmature infants (0.6%). Again, statistical significance was not achieved. As Figure 23 indicates, the WHA had over half of the census tracts with a high proportion of premature infants.

Although the DHA had the shortest mean gestational period (39.17) and the WHA the longest (39.34), the mean gestational age for each Health Area did not vary significantly from one another nor from the City (Table 15).

Table 14: Gestational Age of Infants Born to Residents of the City of Toronto and its Health Areas, 1981 (frequency and percent*).

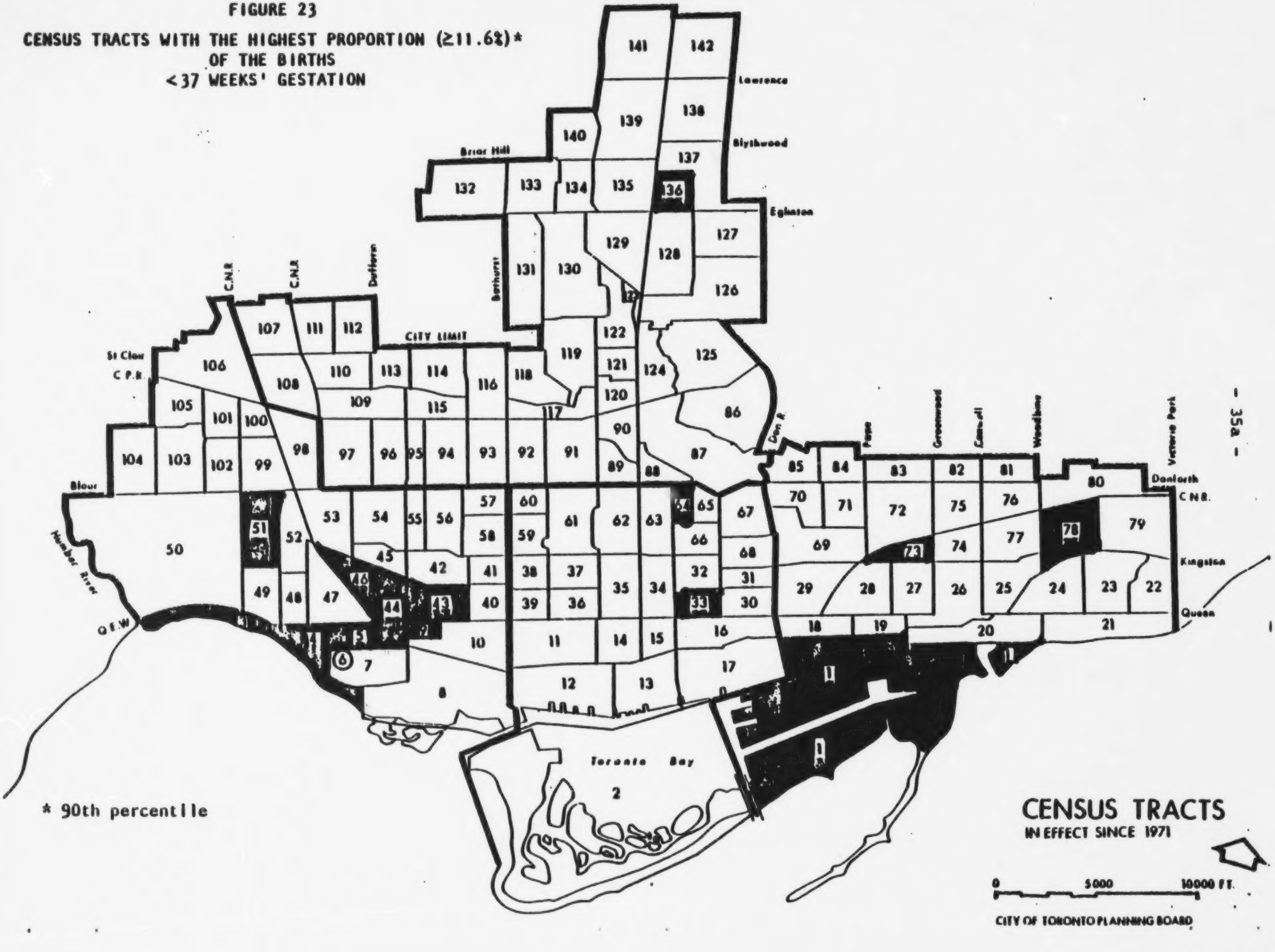
Weeks of Gestation	WHA	NHA	DHA	EHA	CITY
Less than 37	168	134	70	142	514
	7.1	5.8	6.7	7.6	6.8
37-42	2,204	2,148	969	1,701	7,022
	92.3	93.5	92.6	91.2	92.4
43 plus	15	15	7	22	59
	0.6	0.7	0.7	1.2	0.8
Total	2,387	2.297	1.046	1,865	7.595+

* column percent.

+ 2 missing values.

FIGURE 23

CENSUS TRACTS WITH THE HIGHEST PROPORTION (≥11.6%)*
OF THE BIRTHS
<37 WEEKS' GESTATION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CENSUS TRACTS
IN EFFECT SINCE 1971
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CITY OF TORONTO PLANNING BOARD

* 90th percentile

Table 15: Mean Weeks of Gestation for Infants Born in Each Health Area, 1981.

Health Area	Mean Weeks of Gestation
WHA	39.34
NHA	39.31
DHA	39.17
EHA	39.29
Toronto	39.29

Low birthweight is the variable most closely associated with subsequent infant mortality (5). Therefore, it is extremely important to examine the low birthweight ratio of the four Health Areas and of the City.

Birthweight can be divided into three categories: 1) low birthweight (less than 2,500 grams, or 5.5 pounds); 2) normal birthweight (2500-4500 grams); and 3) high birthweight, (greater than 4,500 grams, or 9.9 pounds). These categories are shown in Table 16.

In comparing the Health Areas, the EHA had the highest proportion of low birthweight infants (6.8%), and the WHA had the smallest proportion of low birthweight babies (5.5%).

When looking at high birthweight infants, the NHA had the highest percent (1.6%) and the DHA the lowest (0.96%). Using a test of proportion, however, none of these values differed significantly from the proportion of low birthweight and the proportion of high birthweight for the City as a whole.

The maps (Figure 24 and 25) identify the census tracts with the highest proportion of low and high birthweight infants, respectively (i.e. those in the 90th percentile). The high birthweight census tracts (equal to or greater than 4.4% of live births) were concentrated

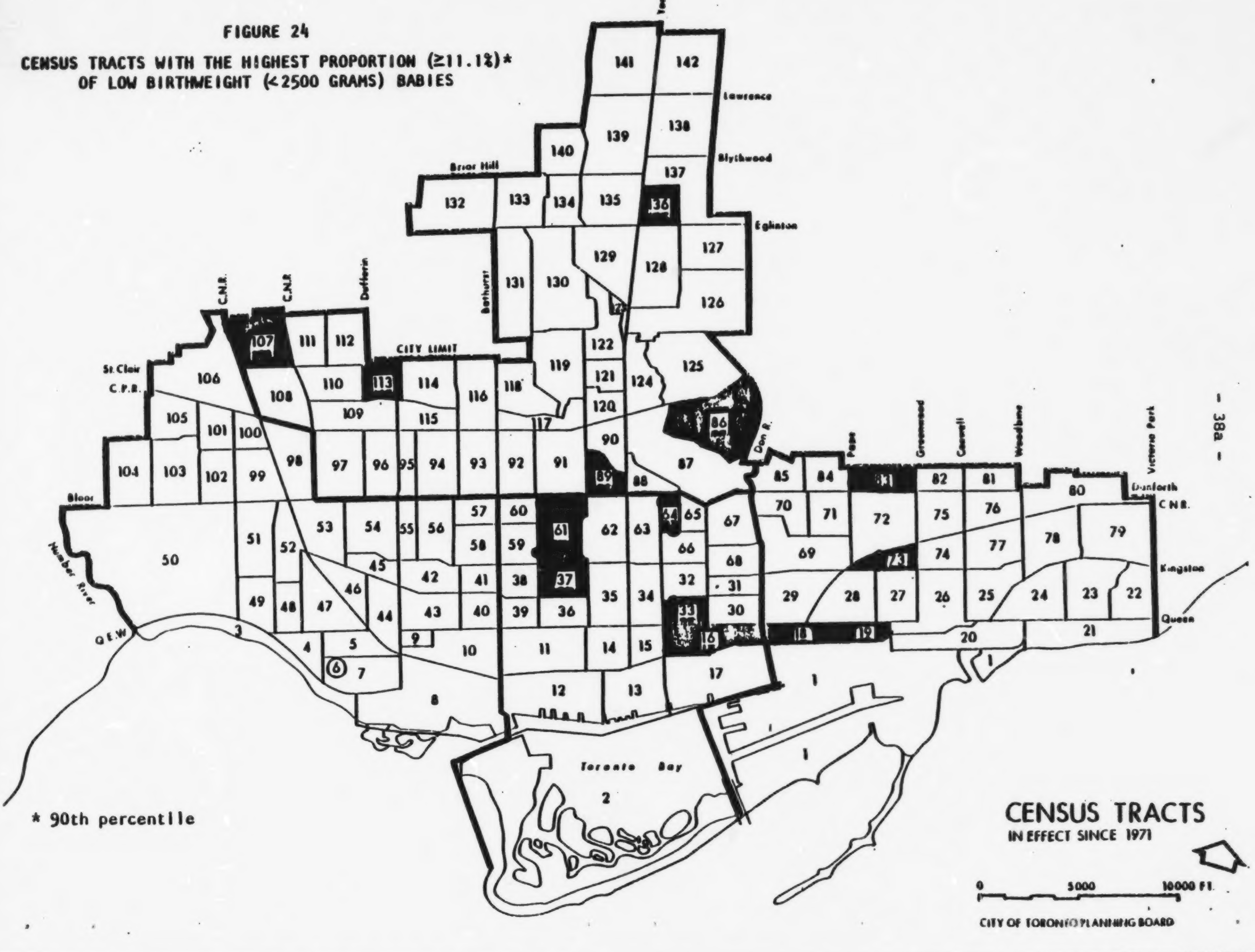
Table 16: Birthweight of Infant by Health Area, 1981*.

Birthweight (grams)	WHA	NHA	DHA	EHA	City
0-2499	132 5.5	135 5.9	67 6.4	127 6.8	461 6.1
2500-4499	2222 93.0	2126 92.6	969 92.6	1712 91.7	7029 92.5
4500+	34 1.4	36 1.6	10 0.96	27 1.4	107 1.4
Total	2388	2297	1046	1866	7597

* percents shown are the column percents.

FIGURE 24

CENSUS TRACTS WITH THE HIGHEST PROPORTION (≥11.1%)*
OF LOW BIRTHWEIGHT (<2500 GRAMS) BABIES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CENSUS TRACTS
IN EFFECT SINCE 1971
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5000
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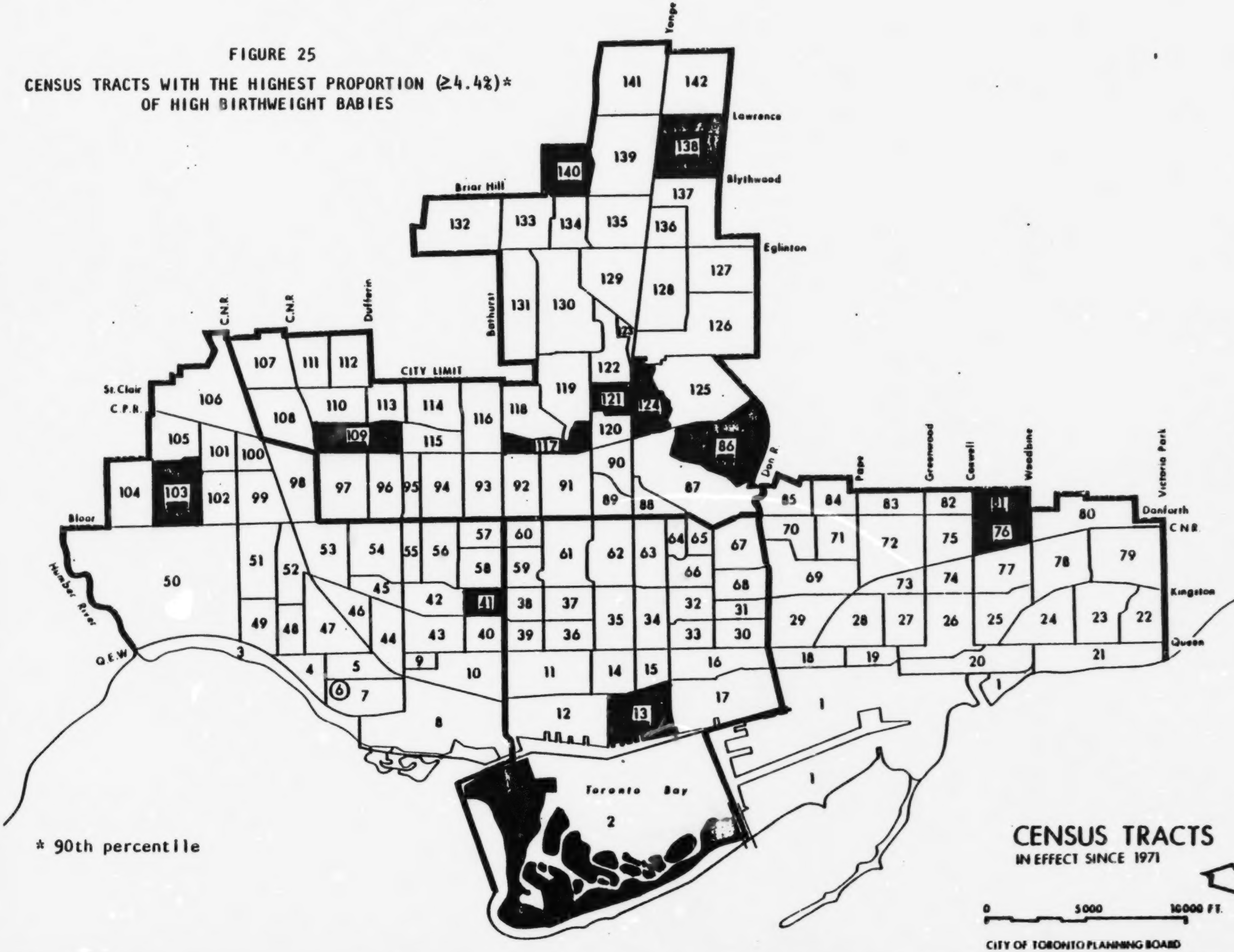
CITY OF TORONTO PLANNING BOARD

* 90th percentile

FIGURE 25

CENSUS TRACTS WITH THE HIGHEST PROPORTION (≥4.4%)* OF HIGH BIRTHWEIGHT BABIES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* 90th percentile

in the NHA. The DHA had over half of the low birthweight census tracts (greater than 11.1% of live births). It is interesting to note that there were several census tracts which overlap on these two maps.

The DHA had a significantly lower mean birthweight compared to the City (Table 17). However, all of the Health Areas had mean birthweights that are considered to be in the normal range.

G. High Risk Factors for Perinatal Mortality

There are many risk factors related to perinatal mortality and morbidity. Some of these are prematurity or low birthweight, maternal age, parity and child spacing, reproductive history, smoking, alcohol use, drug use, maternal nutrition, and intervention during labour and delivery (3). Only the first few can be addressed using available data on the birth certificate. Some of these risk factors are summarized in Table 18.

According to Table 18, the mother's mean age at delivery for the City was 27.4 years. Using an analysis of variance for the four areas, it can be noted that the areas are significantly different ($p<0.0001$). For the City of Toronto, the percent of births to mothers younger than 20 years of age was 7.8. The DHA, with 10.3% teenage births, was significantly higher than the City

Table 17: Mean Birthweights for the City of Toronto and its Health Areas.

Area	Mean Birthweights (gms)
WHA	3326.9
NHA	3358.2
DHA	3296.1*
EHA	3330.8
City	3333.1

* significantly different from City mean birthweight.

Table 18: High Risk Perinatal Mortality Factors by Health Area, 1981.

	WHA	NHA	DHA	EHA	CITY
Mean Age of Mother	26.9	28.5	27.1	27.0	27.4
Percent of Mothers Younger than 20	8.7	4.9**	10.3*	8.7	7.8
Percent of First Births in Mothers Age 35+	2.4	3.1	3.3	1.7	2.5
Percent of Mothers Age 40+	1.6	1.7	1.1	0.7	1.3
Percent of Low Birthweight Babies (2500 grams)	5.5	5.9	6.4	6.8	6.1
Percent of Births Less than 37 Weeks Gestation	7.1	5.8	6.7	7.6	6.8
Mean Number of Total Births	1.8	1.8	1.7	1.7	1.8
Percent with past History of Stillbirths	2.3	1.8	1.3	1.6	1.8

* significantly higher than City.

** significantly lower than City.

(p<0.001). 4.9% of the births in the NHA were to teenagers, and this was significantly lower than the City (p<0.0001). Figure 26 shows that the census tracts with the highest proportion of births to teenage mothers (14.7% or more, the 90th percentile) were clustered in the eastern part of the DHA and the western side of the EHA.

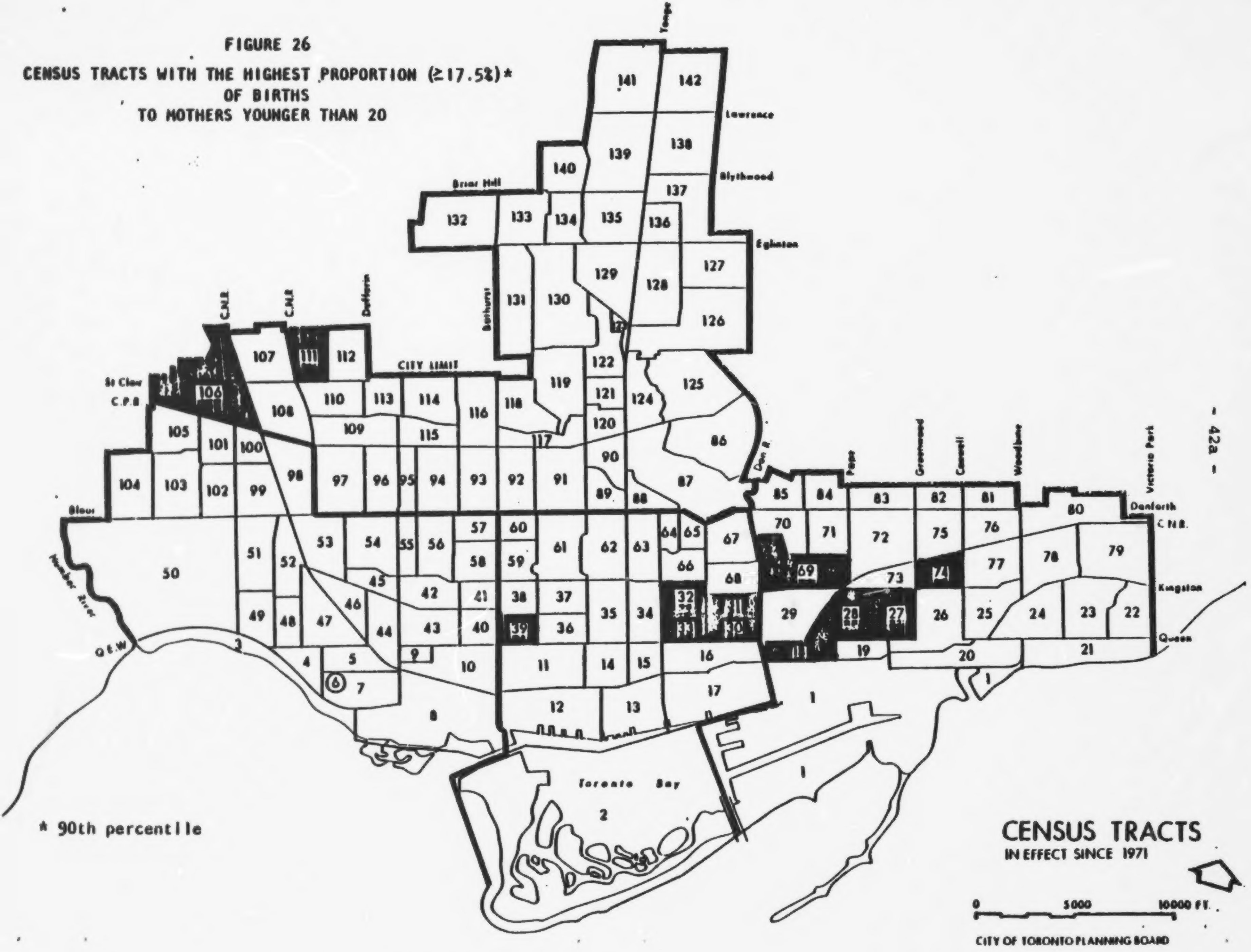
The NHA and DHA had the highest percent of first births in mothers age 35 or older (Table 18). When looking only at first births (Table 19), the NHA had the highest proportion of first births to women 35 or older (11.7%). This was statistically significant (p<0.05) when using a test of proportion to compare the NHA with the percent for the City as a whole (5.2%).

The NHA and WHA had the highest percent of births to women over the age of 40. According to Figure 27, the census tracts with the highest proportion of mothers over the age of 40 (greater than 3.8%, or the 90th percentile) were clustered in the southern part of the NHA.

Women who give birth at 40 years of age or older are considered to be at risk of delivering babies with chromosomal aberrations (5). There is particular risk if the child is a firstborn. As already noted, the NHA and the WHA had the highest percent of births to women over the age of 40. A further breakdown was done for parity

FIGURE 26

CENSUS TRACTS WITH THE HIGHEST PROPORTION (≥17.5%)*
OF BIRTHS
TO MOTHERS YOUNGER THAN 20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Toronto Bay
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10000 FT.
CITY OF TORONTO PLANNING BOARD

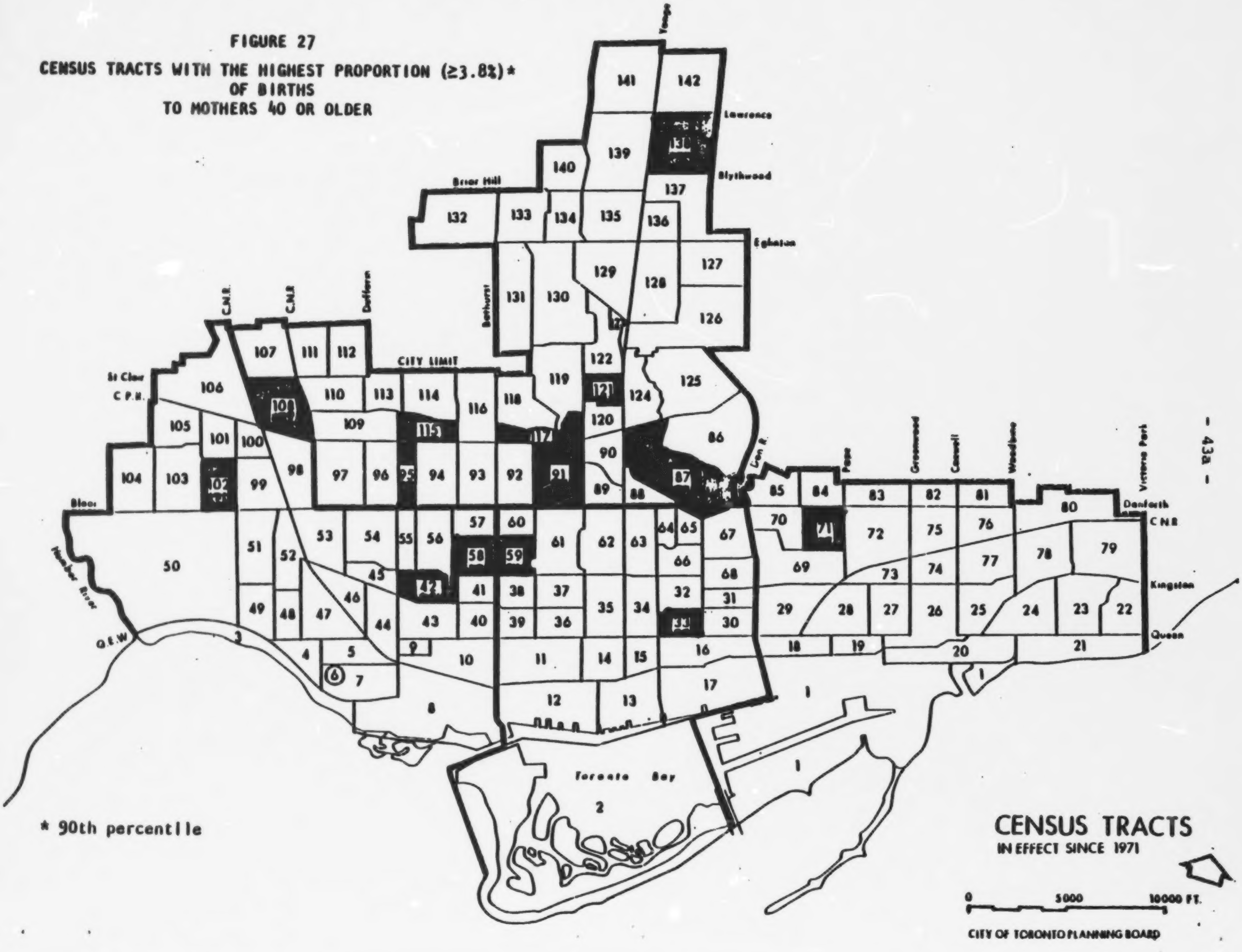
* 90th percentile

Table 19: First Births According to Age of Mother and Health Area.

	35 Years		35+ Years		All First Births	
Health Area	No. of Births	%	No. of Births	%	No. of Births	% of all First Births
WHA	873	94.0	56	6.0	929	24.3
NHA	536	88.3	71	11.7	607	15.9
DHA	1067	96.9	34	3.1	1101	28.8
EHA	1153	97.4	31	2.6	1184	31.0
City	3629	95.0	192	5.2	3821	--

FIGURE 27

CENSUS TRACTS WITH THE HIGHEST PROPORTION (≥3.8%)*
OF BIRTHS
TO MOTHERS 40 OR OLDER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Toronto Bay
CENSUS TRACTS
IN EFFECT SINCE 1971
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CITY OF TORONTO PLANNING BOARD

* 90th percentile

and Health Area for those mothers 40 years of age and older (Table 20). According to this table, there were 37 and 39 births to mothers 40 and over in the WHA and the NHA, respectively. Although 18.9% of these births were first births in the WHA, and 23.1% were first births in the NHA, these proportions appear to be equivalently distributed among the four Health Areas when using a chi-square statistic for goodness-of-fit.

Table 20: Parity of Mothers 40 Years of Age and Over, by Health Area, 1981.

Total Number of Births (including this birth)	WHA		NHA		DHA		EHA		City	
	No.	%	No.	%	No.	%	No.	%	No.	%
1	7	18.9	9	23.1	2	16.7	1	7.7	19	18.8
2	13	35.1	8	20.5	2	16.7	2	15.4	25	24.8
3	4	10.8	5	12.8	4	33.3	4	30.8	17	16.8
4	8	21.6	8	20.5	3	25.0	2	15.4	21	20.8
5	2	5.4	5	12.8	0	—	2	15.4	9	8.9
6	2	5.4	1	2.6	1	8.3	1	7.7	5	5.0
7	0	—	2	5.1	0	—	0	—	2	2.0
8	1	2.7	1	2.6	0	—	1	7.7	3	3.0
Total	37		39		12		13		101	

V. MORTALITY

A. Introduction

The information available on mortality in the Toronto Department of Public Health primarily is collected from the death certificate of Toronto residents. Although mortality information does not give the entire picture of the burden of various illnesses, it does enable the Department of Public Health to evaluate at least a portion of this burden.

There are several ways of looking at mortality data. One can start by looking at the numbers of deaths, followed by rates, standardized directly and indirectly. Another measure of the impact of mortality on society is the Potential Years of Life Lost (PYLL). This statistic is a measure of premature deaths, and thus can be used to assist in setting priorities. Infant mortality (deaths of children under 1 year of age) will be examined separately from general mortality because of its universal importance as a health indicator, and because the causes of death are different for this group compared to other ages.

B. Infant Mortality

In 1981 there were 64 infant deaths, and 93 in 1980. Due to small numbers, 1980 and 1981 infant mortality have been analyzed together.

According to Figure 28, infant mortality occurred throughout the City, with no evidence of clustering. In general, however, the west end of the City appears to have had more infant deaths. The Western and Northern Health Areas had the highest proportion of infant mortality (36.1% and 32.9%) (Table 21), although their rates and the DHA's were about the same. The EHA had the lowest infant mortality rate of the four Health Areas.

The causes of infant death are shown in Table 22. Congenital anomalies accounted for the largest proportion of infant deaths in the City (31.0%). This was also true for the WHA (37.5%), the NHA (35.3%), and the EHA (20.0%) (when excluding all other causes). Approximately 17% of the infant deaths in the Northern and Downtown Health Areas were due to sudden infant death syndrome (SIDS), while SIDS only accounted for 7-8% in the Western and Eastern Health Areas. Numbers are extremely small to draw conclusions.

33.8% of the infant deaths in the City occurred within

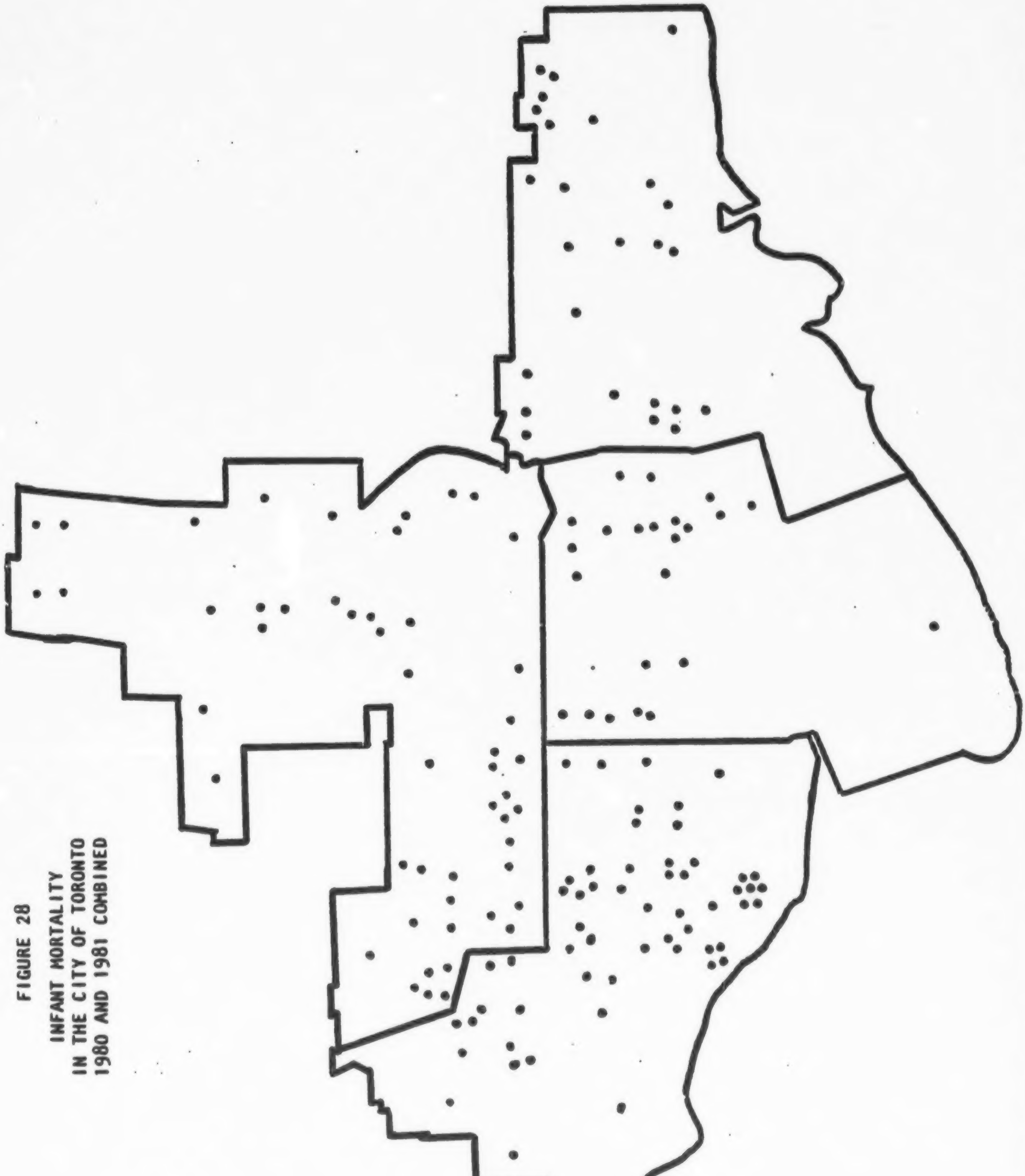


FIGURE 28

INFANT MORTALITY
IN THE CITY OF TORONTO
1980 AND 1981 COMBINED

Table 21: 1980 and 1981 Infant Mortality by Health Area of the City of Toronto.

Health		1980			1981			Total	
Area	No.	%	Rate*	No.	%	Rate*	No.	%	Rate*
WHA	37	40.6	13.8	19	29.7	8.0	56	36.1	11.1
NHA	28	30.8	11.1	23	35.9	10.0	51	32.9	10.6
DHA	11	12.1	10.9	12	18.8	11.5	23	14.8	11.2
EHA	15	16.5	8.0	10	15.6	5.4	25	16.1	6.7
City	93+	100	11.5	64	100	8.4	157	99.9**	10.0

* per 1,000 live births.

+ 2 missing observations.

** does not equal 100.0% because of rounding.

Table 22: Infant Deaths by Health Area and Cause, in the City of Toronto, 1980 and 1981 Combined.

Cause of Death	WHA No.	WHA %	NHA No.	NHA %	DHA No.	DHA %	EHA No.	EHA %	City No.	City %
Short Gestation	10	17.9	10	19.6	6	26.1	3	12.0	29	18.7
Sudden Infant Death Syndrome	4	7.1	9	17.6	4	17.4	2	8.0	19	12.3
Congenital Anomalies	21	37.5	18	35.3	4	17.4	5	20.0	48	31.0
Respiratory Distress Syndrome	1	1.8	2	3.9	0	0.0	3	12.0	6	3.9
Other Perinatal	8	14.3	5	9.8	5	21.7	4	16.0	22	14.2
All Other Causes	12	21.4	7	13.7	4	17.4	8	32.0	31	20.0
Total	56	100.0	51	99.9*	23	100.0	25	100.0	155*	100.1+

* 2 missing values in 1980 data.

+ does not equal 100.0% because of rounding.

the first day of life, and 54.9% within the first week (Table 23). This pattern is true of each of the Health Areas as well.

There has been a steady decline in infant mortality rates (IMR) in the City since 1940 (Figure 29). The 1981 IMR of 8.4 per 1,000 live births is approximately 1/5 of the 1940 IMR. The Neonatal Mortality Rate (5.3 per 1,000 live births), is approximately 1/6 the 1940 rate and the Natal Day Mortality Rate about 1/3 the 1940 rate.

Because each period of infancy is amenable to different types of public health intervention, it is important to examine perinatal death rates according to time of occurrence in the perinatal period. According to Table 24, the rate of stillbirth was similar in all the Areas, while the infant mortality rate was highest in the DHA. On the other hand, the NHA had the highest neonatal mortality rate, as well as the highest natal day mortality rate. The overall perinatal mortality rate was highest in the DHA, while the EHA's was the lowest. These comparisons are graphically represented in Figure 30.

Despite these differences among Health Areas, however, for each of the death rates occurring within the perinatal period, the 95% confidence intervals for each Area was within the 95% confidence intervals for the

Table 23: 1980 and 1981 Infant Deaths by Age at Death and Health Area.

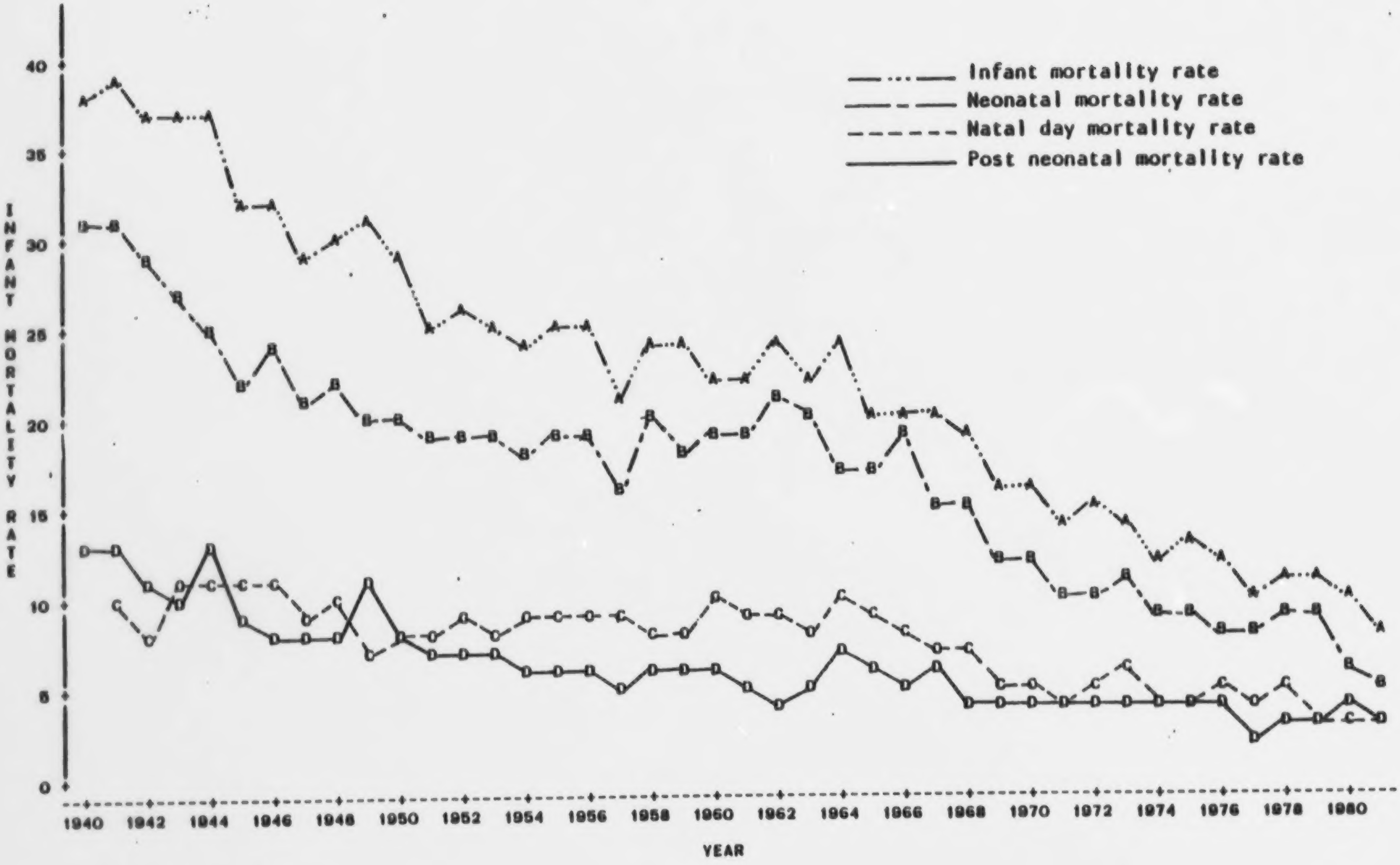
	WHA		NHA		DHA		EHA		City	
Age	No.	%	No.	%	No.	%	No.	%	No.	%
Less than 1 day	19	37.3	14	29.2	6	30.0	9	39.1	48	33.8
1-6 days	11	21.6	10	20.8	4	20.0	5	21.7	30	21.1
7-27 days	6	11.8	4	8.3	1	5.0	1	4.3	12	8.5
28 days-2 months	4	7.8	8	16.7	5	25.0	4	17.4	21	14.8
3-5 months	8	15.7	7	14.6	4	20.0	4	17.4	23	16.2
6-12 months	3	5.9	5	10.4	0	0.0	0	0.0	8	5.6
Total	51	100.1*	48	100.0	20	100.0	23	99.9*	142+	100.0

* does not equal 100.0% because of rounding.

+ 15 missing values in 1980 data.

FIGURE 29

CITY OF TORONTO
INFANT MORTALITY RATES*
1940 - 1981



* Per 1,000 live births

Table 24: 1981 Mortality Rates for Children Under 1 year of Age by Health Area.

	WHA	NHA	DHA	EHA	CITY
Stillbirth Rate*	6.7	6.5	6.7	6.4	6.6
Perinatal Mortality Rate +	10.8	10.8	12.3	8.0	10.2
Natal Day Mortality Rate **	2.1	4.8	4.8	2.1	3.3
Neonatal Mortality Rate ++	5.4	6.5	5.7	3.2	5.3
Infant Mortality Rate ***	8.0	10.0	11.5	5.4	8.4

* stillbirths of 20 plus weeks' gestation per 1,000 live births.

+ stillbirths 28 plus weeks' gestation, plus deaths under 1 week per 1,000 live births and stillbirths.

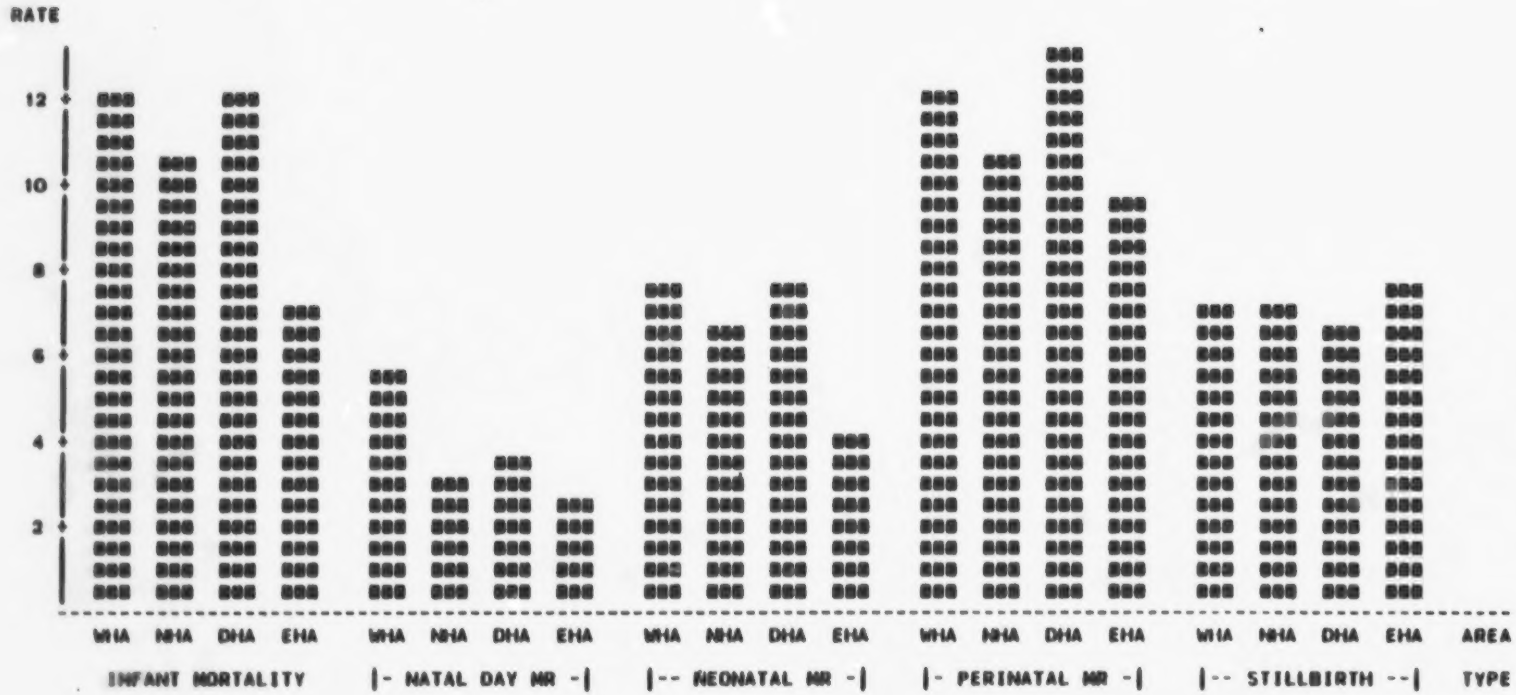
** deaths under 1 day per 1,000 live births.

++ deaths under 28 days per 1,000 live births.

*** deaths under 1 year per 1,000 live births.

FIGURE 30

MORTALITY RATES IN THE PERINATAL PERIOD*
BY HEALTH AREA
1979 - 1981 COMBINED



* See definitions in Table 24

City. In other words, there was no significant difference between the rates in the Areas compared to those of the City as a whole.

C. Mortality Count

In 1981 there were 5,083 deaths of City of Toronto residents (Table 25). Table 25 shows that the distribution of the Health Areas' population compared with the distribution of deaths was similar. The NHA had the highest proportion of deaths, and the DHA the smallest. This is not surprising since the North had the biggest population and the Downtown the smallest.

The sex- and cause-specific mortality counts for the Health Areas are found in Figures 31 to 34. These charts include only the top twenty causes of death for each Health Area by sex (Appendix 1 lists the ICD-9 categories included in each cause of death).

In 1981 ischaemic heart disease (IHD) and myocardial infarction (MI) were the top two causes of death for each Health Area and sex. Cancer of the lung and trachea ranked third for males in each Health Area. For females acute cerebrovascular disease (ACVD) ranked third, and breast cancer in females was number four in all Health Areas but the DHA. From the fourth rank on, the Health Areas had a different ranking of cause of death. Many of

Table 25: Proportion of Deaths and Population in Each of the Health Areas of the City of Toronto, 1981.

Health Area	Deaths No.	Deaths %	Percent of City Population
WHA	1,414	27.8	27.1
NHA	1,724	33.9	36.8
DHA	853	16.8	15.6
EHA	1,092	21.5	20.5
City	5,083	100.0	100.0

FIGURE 31

WESTERN HEALTH AREA
SEX- AND CAUSE- SPECIFIC MORTALITY COUNT FOR 1981

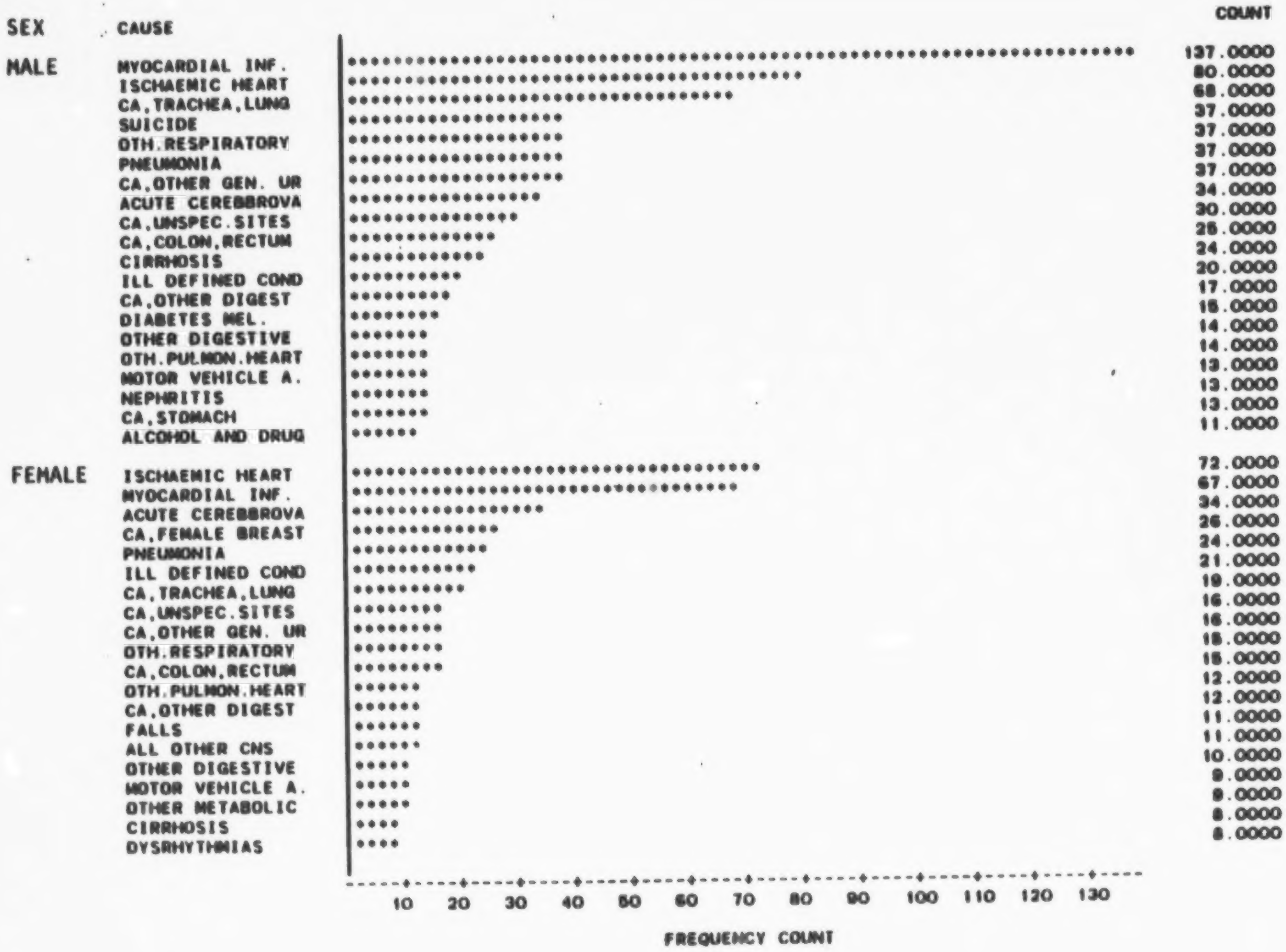


FIGURE 32

NORTHERN HEALTH AREA
SEX- AND CAUSE- SPECIFIC MORTALITY COUNT FOR 1981

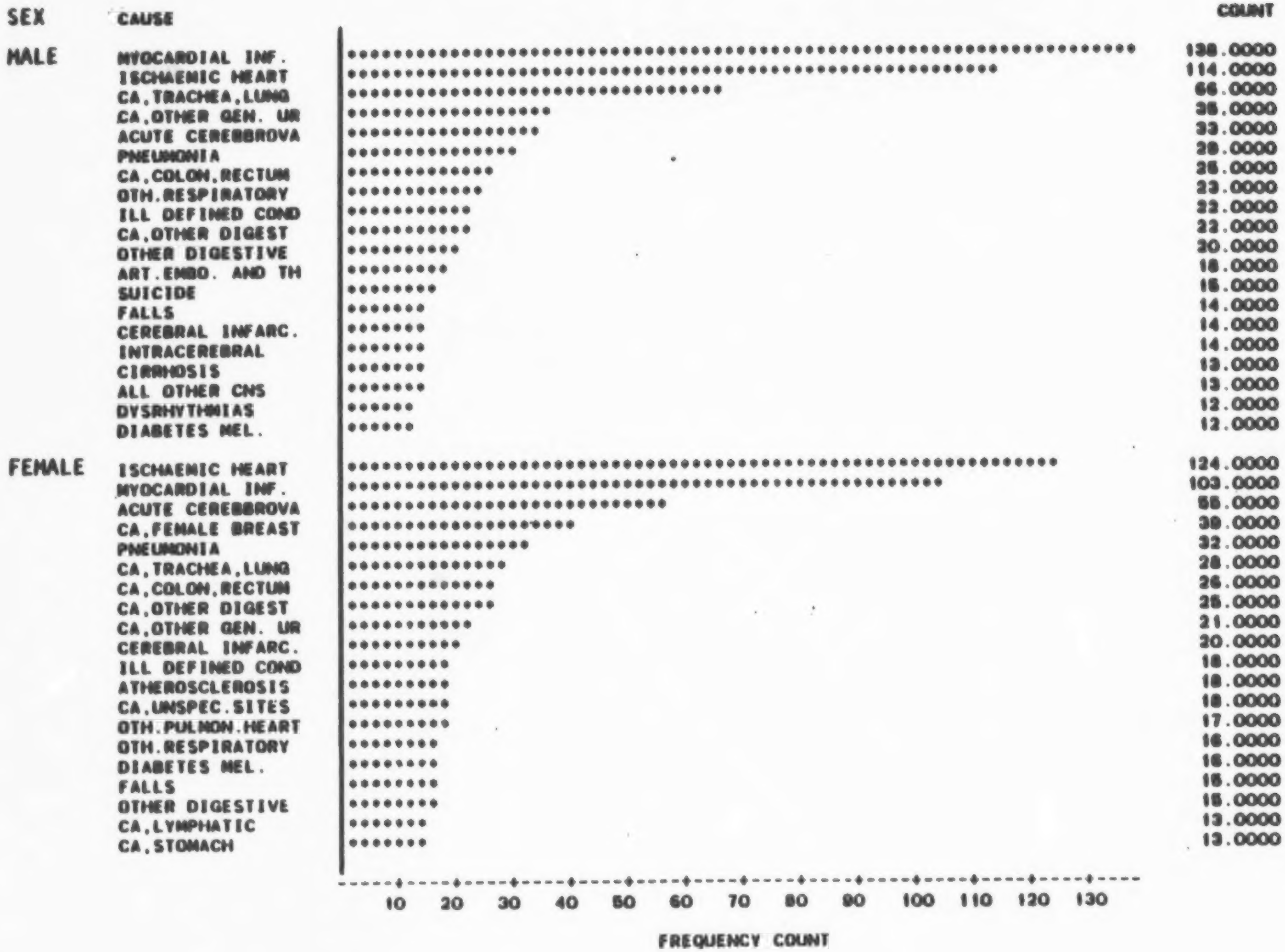


FIGURE 33

DOWNTOWN HEALTH AREA
SEX- AND CAUSE- SPECIFIC MORTALITY COUNT FOR 1981

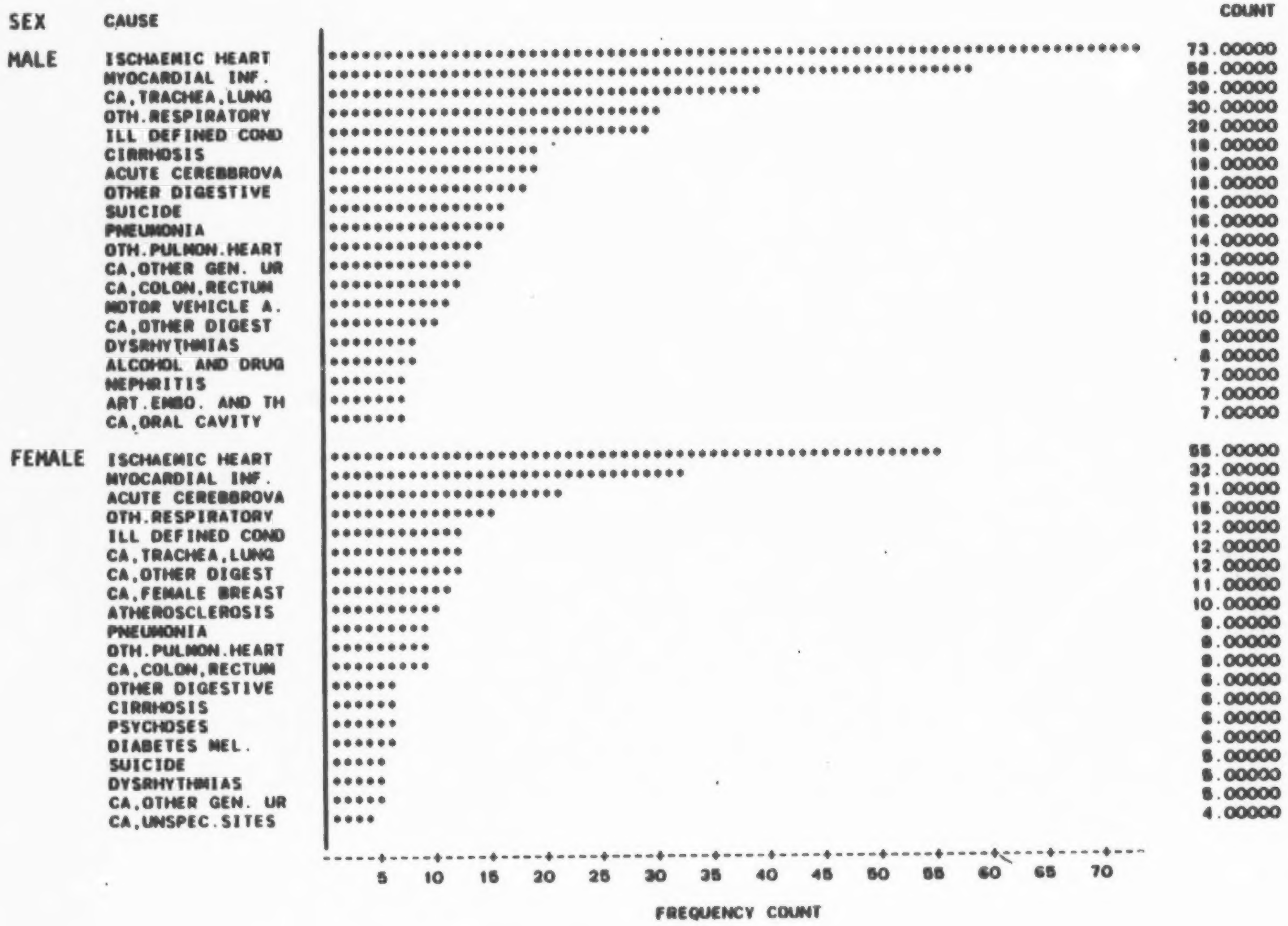
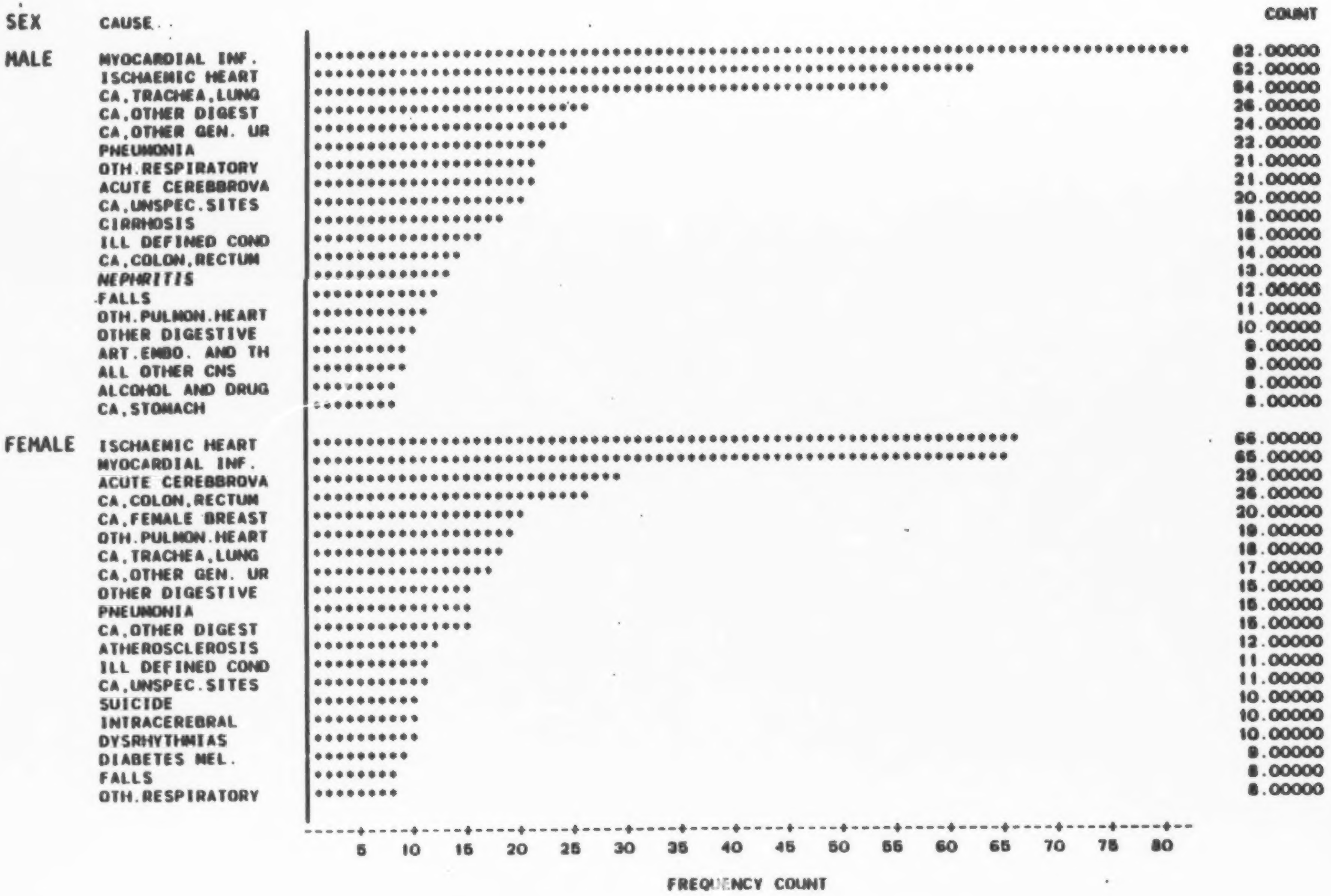


FIGURE 34

EASTERN HEALTH AREA
SEX- AND CAUSE- SPECIFIC MORTALITY COUNT FOR 1981



the same causes of death were found in the top 20 in all four Health Areas. Some of these causes of death will be looked at in more detail later.

D. Mortality Rates

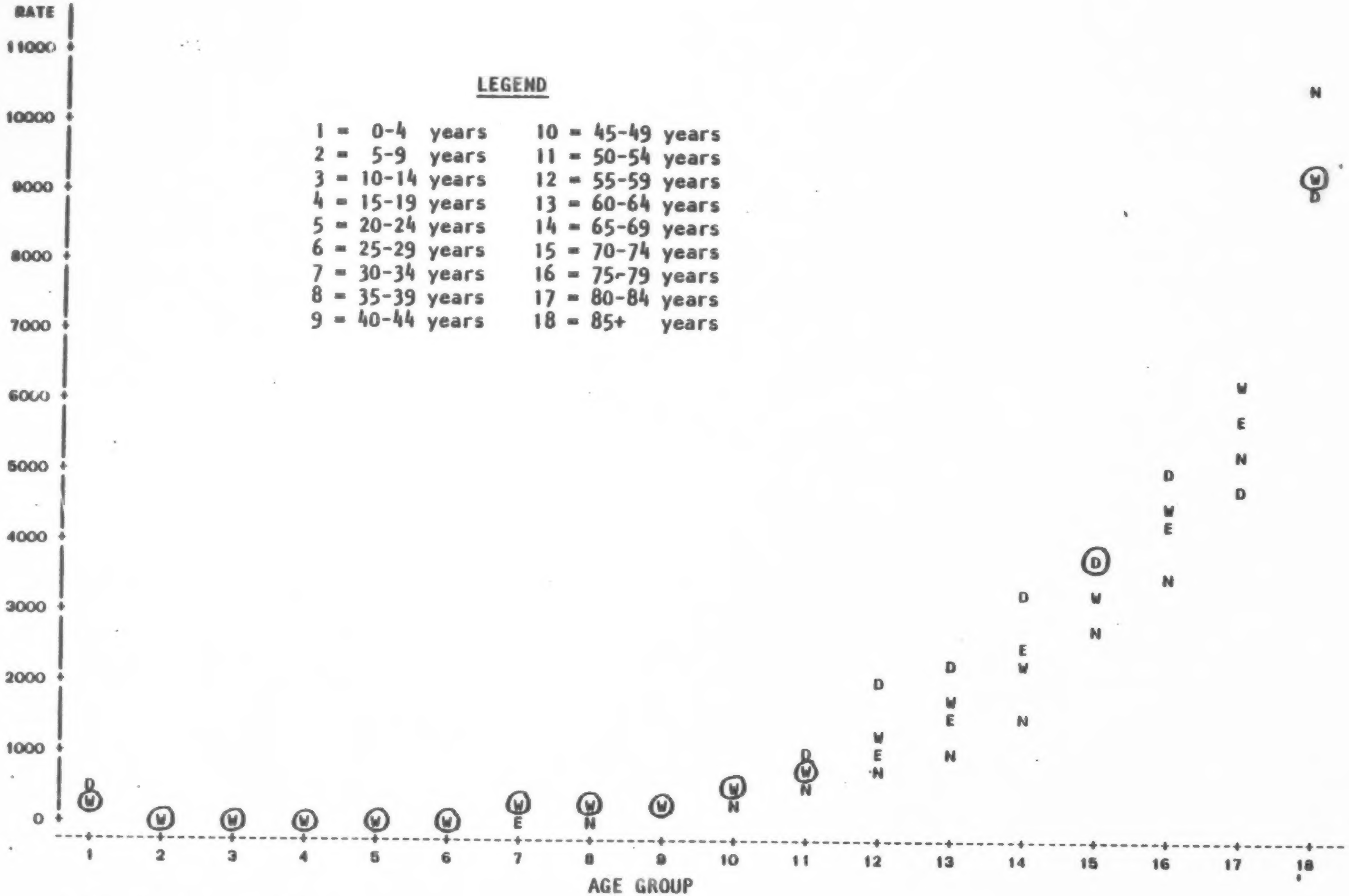
A more informative way to look at mortality is by using rates. To begin with, an age-specific death rate was calculated for all four Health Areas and is displayed in Figure 35.

The obvious effect of age on mortality is seen in this graph. At every age the mortality rate in the four Health Areas was similar until around age 50 when the DHA began to surpass the other Areas. The West and the North, however, had the highest rates in the oldest age group (older than 80 years of age).

In Tables 26 through 28, the age standardized mortality rates are presented for a few major causes of death. The direct standardized mortality rate (DSR) was used so comparisons could be made between the Health Areas. These rates are standardized to the 1981 Ontario population and therefore accommodate for the different population profiles of the Health Areas (4). Because of the extent of the information given in these tables, a further table (Table 29) has been compiled to summarize some of the information.

FIGURE 35

CITY OF TORONTO
DEATH RATES* BY AREA AND AGE GROUP
1981



* Per 100,000 population

○ More than one Health Area overlaps

Table 26: 1981 Age Standardized* Mortality Rates+ For the Health Areas of the City of Toronto.

Cause	WHA	NHA	DHA	EHA
All Causes	673.9	519.5++	804.8**	656.3
Acute Cerebrovascular Disease	28.6	21.8	32.2	24.0
Ischaemic Heart Disease	64.2	60.0	109.0**	67.7
Atherosclerosis	3.3	5.9	9.5	7.1
Myocardial Infarction	95.2	69.9	84.9	88.1
Cancer Lung Trachea	42.7	31.8	49.2	49.2
Breast Cancer	12.3	12.8	11.7	14.1
Colon Cancer	19.5	15.6	19.3	24.8
Other Genito-Urinary Cancer	24.2	16.5	15.5	24.6
Leukemia	4.2	4.0	6.5	2.4
All Cancers	181.0	135.8++	175.0	191.5
Diabetes Mellitus	9.7	7.8	9.6	9.9
Cirrhosis	18.0	7.2++	26.9**	18.3
Motor Vehicle Accident	12.2	6.9	13.5	6.8
Suicide	25.0	10.1	20.3	13.2

* Standardized to the 1981 Ontario population.

+ per 100,000 population.

** significantly higher than Toronto's DSR ($p<0.01$).

++ significantly lower than Toronto's DSR ($p<0.01$).

Table 27: 1981 Age Standardized* Mortality Rates+ for Males by City of Toronto Health Areas.

Cause	WHA	NHA	DHA	EHA
All Causes	792.2	596.6++	952.5**	736.4
Acute Cerebrovascular Disease	27.1	19.3	28.0	19.9
Ischaemic Heart Disease	68.8	66.5	121.9**	73.6
Atherosclerosis	2.9	4.4	4.4	4.4
Myocardial Infarction	127.6	95.0	104.3	109.3
Cancer Lung, Trachea	64.0	48.3	70.0	74.5
Colon Cancer	22.2	16.9	20.8	17.5
Other Genito-Urinary Cancer	29.1	21.0	17.5	27.3
Leukemia	3.9	4.0	3.0	1.5
All Cancers	208.2	144.1++	185.9	219.9
Diabetes Mellitus	9.7	7.8	9.6	9.9
Cirrhosis	26.9	10.6++	39.0	26.9
Motor Vehicle Accident	14.5	8.6	21.6	6.3
Suicide	42.4**	13.0	29.9	11.2

* Standardized to the 1981 Ontario males population.

+ per 100,000 population.

** significantly higher than Toronto's DSR ($p<0.01$).

++ significantly lower than Toronto's DSR ($p<0.01$).

Table 28: 1981 Age Standardized* Mortality Rates+ for Females by City of Toronto Health Areas.

Cause	WHA	NHA	DHA	EHA
All Causes	541.9	461.7++	624.4**	581.8
Acute Cerebrovascular Disease	29.8	24.9	37.0	27.9
Ischaemic Heart Disease	59.2	56.0	93.6**	62.0
Atherosclerosis	3.8	7.3	16.8	10.0
Myocardial Infarction	59.5	50.0	61.5	68.7
Cancer Lung, Trachea	19.0	17.8	25.1	25.3
Breast Cancer	25.4	24.0	24.6	28.0
Colon Cancer	15.5	14.8	17.7	31.8
Other Genito-Urinary Cancer	17.5	12.7	11.4	21.7
Leukemia	4.4	4.2	9.6	3.3
All Cancers	148.3	130.4	160.0	165.2
Diabetes Mellitus	5.5	8.3	10.1	10.7
Cirrhosis	8.9	4.4	12.9	10.2
Motor Vehicle Accident	10.0	5.6	4.4	7.2
Suicide	7.2	7.7	9.6	15.1

* Standardized to the 1981 Ontario female population.

+ per 100,000 population.

** significantly higher than Toronto's DSR (p<0.01).

++ significantly lower than Toronto's DSR (p<0.01).

Table 29: Health Areas with the Highest Age-Standardized Death Rates by Cause and Sex.

Cause	Male	Female	Total
All Causes	DHA*	DHA*	DHA*
Acute Cerebrovascular Disease	DHA	DHA	DHA
Ischaemic Heart Disease	DHA*	DHA*	DHA*
Atherosclerosis	NHA/DHA/EHA	DHA	DHA
Myocardial Infarction	WHA	EHA	WHA
Lung Cancer	EHA	EHA	EHA/DHA
Cancer of Female Breast	---	EHA	EHA
Colon Cancer	DHA	EHA	EHA
Other Genito-Urinary Cancer	WHA	EHA	EHA
Leukemia	NHA	DHA	DHA
All Cancers	EHA	EHA	EHA
Diabetes Mellitus	WHA	EHA	EHA
Cirrhosis	DHA	DHA	DHA*
Motor Vehicle Accident	DHA	WHA	DHA
Suicide	WHA*	EHA	WHA

* significantly higher than Toronto's DSR ($p<0.01$).

According to Tables 26-29, the DHA may have the most serious health problems, based on mortality. It had the highest DSR for acute cerebrovascular disease, ischaemic heart disease, colon cancer, cirrhosis, motor vehicle accidents (MVA), and all causes combined in males. Females in the DHA had the highest DSR for acute cerebrovascular disease, ischaemic heart disease, atherosclerosis, leukemia, cirrhosis and all causes combined.

The EHA may have the next most serious health problems according to mortality data. EHA males had the highest DSR for all cancers combined and lung cancer in particular. Females in the EHA had the highest rates for myocardial infarction, diabetes mellitus, suicide, lung cancer, breast cancer, colon cancer, other genito-urinary cancers, and all cancers combined. The WHA appears on this table only four times for males and once for females. On the other hand, the NHA had the lowest rates for the majority of the causes of death which were analyzed. Leukemia in males is the only cause of death for which the NHA had the highest rate.

Despite these differences in DSR among the Areas, however, only a few of the rates differed significantly from the City rates ($p<0.01$), when using a statistical test for differences of DSR's (J. Hsieh, unpublished).

For males (Table 27), the NHA was significantly lower than the City for all causes, all cancers, and cirrhosis of the liver. The DHA was significantly higher for all causes combined and ischaemic heart disease, while the WHA standardized rate of suicide was significantly higher.

Females in the NHA (Table 28) had a lower standardized rate for all causes compared to the City. On the other hand, the DHA again was significantly higher for all causes and for ischaemic heart disease.

To further identify high risk groups, age-, sex-, cause-specific mortality rates can be used. Appendix 3 through 10 present these rates for each Health Area. Again, because these charts provide a lot of information, summary tables (Tables 30 and 31) have been provided.

According to the charts in Appendices 3 through 10 and Tables 30 and 31, the following observations can be made:

In the age groups younger than 45 years of age, the violent deaths such as suicide, motor vehicle accidents, other accidents, and injuries seem to predominate in all Health Areas and both sexes. Some of the cancers start to appear in the top ranks of rates for the younger female group in the Downtown and Eastern Health Areas.

Table 30: Top Three Causes of Death by Age Group and Health Area for Males, 1981.

Age in Years	WHA	NHA	DHA	EHA
0-1	respiratory problems	abnormal growth	abnormal growth	respiratory problems
	abnormal growth	all congenital anomalies	all congenital anomalies	abnormal growth
	all congenital anomalies	congenital heart	fetus with complications	other perinatal
1-4	congenital heart	cancer unspecified sites	---	---
	cancer unspecified sites			
5-14	drowning	drowning	homicide	nephritis
	other pulmonary embryonic	MVA	MVA	cancer other genital/urinary
		pneumonia	all congenital anomalies	
15-24	suicide	suicide	suicide	drug poisoning
	burns	MVA	MVA	suicide
	homicide	all other cancers	other external injuries	MVA

Table 30: Top Three Causes of Death by Age Group and Health Area for Males, 1981. (Cont'd)

Age in Years	WHA	NHA	DHA	EHA
25-34	suicide	other transportation accidents	suicide	suicide
	myocardial infarction	MVA	MVA	drowning
	MVA	suicide	homicide	solid/liquid poisoning
35-44	suicide	cirrhosis	cirrhosis	ischaemic heart disease
	MVA	suicide	ischaemic heart disease	myocardial infarction
	cirrhosis	cancer colon	myocardial infarction	cancer lung
45-54	cancer lung	myocardial infarction	myocardial infarction	myocardial infarction
	suicide	cancer lung	cirrhosis	ischaemic heart disease
	cirrhosis	suicide	suicide	cancer lung
55-64	MI	myocardial infarction	ischaemic heart disease	myocardial infarction
	cancer lung	cancer lung	myocardial infarction	cancer lung
	ischaemic heart disease	suicide	cancer lung	ischaemic heart disease

Table 30: Top Three Causes of Death by Age Group and Health Area for Males, 1981. (Cont'd)

Age in Years	WHA	NHA	DHA	EHA
65-74	myocardial infarction	myocardial infarction	ischaemic heart disease	myocardial infarction
	ischaemic heart disease	ischaemic heart disease	myocardial infarction	cancer lung
	cancer lung	cancer lung	cancer lung	ischaemic heart disease
75-84	myocardial infarction	myocardial infarction	ischaemic heart disease	ischaemic heart disease
	ischaemic heart disease	ischaemic heart disease	other respiratory	myocardial infarction
	other respiratory	cancer lung	myocardial infarction	pneumonia
85+	pneumonia	ischaemic heart disease	ischaemic heart disease	ischaemic heart disease
	ischaemic heart disease	myocardial infarction	other respiratory	acute cerebrovascular disease
	myocardial infarction	pneumonia	cancer other genital/urinary	other respiratory

Table 31: Top Three Causes of Death by Age Group and Health Area for Females, 1981.

Age in Years	WHA	NHA	DHA	EHA
0-1	all congenital anomalies	congenital heart	respiratory problem	all other CNS
	abnormal growth	respiratory problems	abnormal growth	other perinatal
	other external injury	abnormal growth		congenital heart
1-4	spina bifida	other accidents	MVA	burns
	all other cancers	——	all congenital anomalies	MVA
			other respiratory	upper respiratory tract
5-14	other metabolic	MVA	cancer lymphatic	suicide
	cancer brain	anaemias	leukaemia	
15-24	other external injury	other metabolic	homicide	MVA
	MVA	other external injury	other pulmonary heart	
		suicide	myocardial infarction	

Table 31: Top Three Causes of Death by Age Group and Health Area for Females, 1981. (Cont'd)

Age in Years	WHA	NHA	DHA	EHA
25-34	MVA	suicide	suicide	suicide
	suicide	MVA	drug poisoning	drug poisoning
	other external injury	leukaemia	cancer female breast	MVA
35-44	cancer brain	cirrhosis	other digestive	suicide
	suicide	cancer female breast	acute cerebrovascular disease	cancer female breast
	drug adverse effect	other digestive	ischaemic heart disease	cirrhosis
45-54	cancer colon	cancer female breast	myocardial infarction	cancer female breast
	suicide	falls	cancer lung	cancer colon
	cancer female breast	subarachnoid	falls	cancer lung
55-64	cancer other genital/urinary	cancer lung	myocardial infarction	myocardial infarction
	myocardial infarction	cancer female breast	cancer female breast	cancer other genital/urinary
	cancer female breast	cancer other digestive	other respiratory	cancer other digestive

Table 31: Top Three Causes of Death by Age Group and Health Area for Females, 1981. (Cont'd)

Age in Years	WHA	NHA	DHA	EHA
65-74	myocardial infarction	myocardial infarction	ischaemic heart disease	ischaemic heart disease
	acute cerebrovascular disease	ischaemic heart disease	myocardial infarction	myocardial infarction
	ischaemic heart disease	cancer lung	cancer other digestive	cancer colon
75-84	myocardial infarction	myocardial infarction	ischaemic heart disease	ischaemic heart disease
	ischaemic heart disease	ischaemic heart disease	other respiratory	myocardial infarction
	other respiratory	cancer lung	myocardial infarction	pneumonia
85+	pneumonia	ischaemic heart disease	ischaemic heart disease	ischaemic heart disease
	ischaemic heart disease	myocardial infarction	other respiratory	acute cerebrovascular disease
	myocardial infarction	pneumonia	cancer other genital/urinary	other respiratory

Cancer and heart-related deaths are prominent in the 45 to 64 year old age groups. In males, suicide is found in the top ten causes of death in all but the EHA. Male cirrhosis ranks fairly high in the age group younger than 55 in the WHA and the DHA.

Heart and cerebrovascular disease predominate in the remaining age groups for both sexes. Cancers are also major causes of death. The males in the WHA and DHA have respiratory-related causes of death in the top ten.

Overall, it can be concluded that the younger age groups are at higher risk of violent death, cancers are likelier in the middle age groups, and the oldest age groups are at highest risk of heart disease.

E. Other Mortality Indicators

1. Introduction

Besides looking at the numbers and rates of death, there are other indicators which can give a different sort of picture to mortality. These mortality indicators include 1) mean age at death, 2) Potential Years of Life Lost, and 3) Standardized Mortality Ratio. These indicators are discussed below.

2. Mean age at death

Comparing the mean age at death for each Health Area with the City mean (Table 32), the following was noted:

a. The WHA had a lower mean age at death compared to the City for males and for both sexes combined ($p<0.05$).

b. The mean age at death for males, females, and both sexes combined in the NHA was higher than for the City ($p<0.001$).

c. The mean age at death for males, females and both sexes combined in the DHA was lower than the City means ($p<0.001$).

d. The mean age at death in the EHA for males, females, and both sexes combined was about the same as the City means.

e. Compared to the other Areas, the NHA had the highest mean age at death for males, females, and both sexes combined ($p<0.001$ for all comparisons).

f. The DHA had the lowest mean age at death for males, females and both sexes combined ($p<0.001$ for all comparisons).

Table 32: Mean Age at Death by Sex and Health Area, 1981.

	Male	Female	Both Sexes
WHA	66.7*	73.0	69.2*
NHA	71.7*	75.6*	73.6*
DHA	65.8*	69.8*	67.3*
EHA	68.0	73.8	70.8
City	68.3	73.7	70.7

* significantly different from the mean age at death for the City.

The two statistical procedures used for comparison were analysis of variance (ANOVA) and an unpaired t-test.

3. Potential Years of Life Lost (PYLL)

Potential Years of Life Lost (PYLL) can be used as a means of priorizing mortality information. PYLL is a measure of premature death, and is the sum of the number of years remaining to age 70, from age at death, for a specific cause of death. This statistic does not include deaths under the age of 1 (5).

According to Figures 36 to 39 the male PYLL is greater than the female PYLL. For example, the top male PYLL in the WHA was approximately five times greater than the female PYLL. This is the largest difference between the sexes for all the Health Areas. The Northern Health Area had the smallest discrepancy, with approximately a 4 to 3 ratio of male to female PYLL.

Besides the difference in PYLL between males and females, Figure 36 gives the following information for the WHA.

a. In the WHA, motor vehicle accidents had the highest PYLL in 1981 for females. On the other hand, MVA ranked number 17 according to numbers of deaths (Figure 31).

FIGURE 36

WESTERN HEALTH AREA
POTENTIAL YEARS OF LIFE LOST
BY SEX, 1981

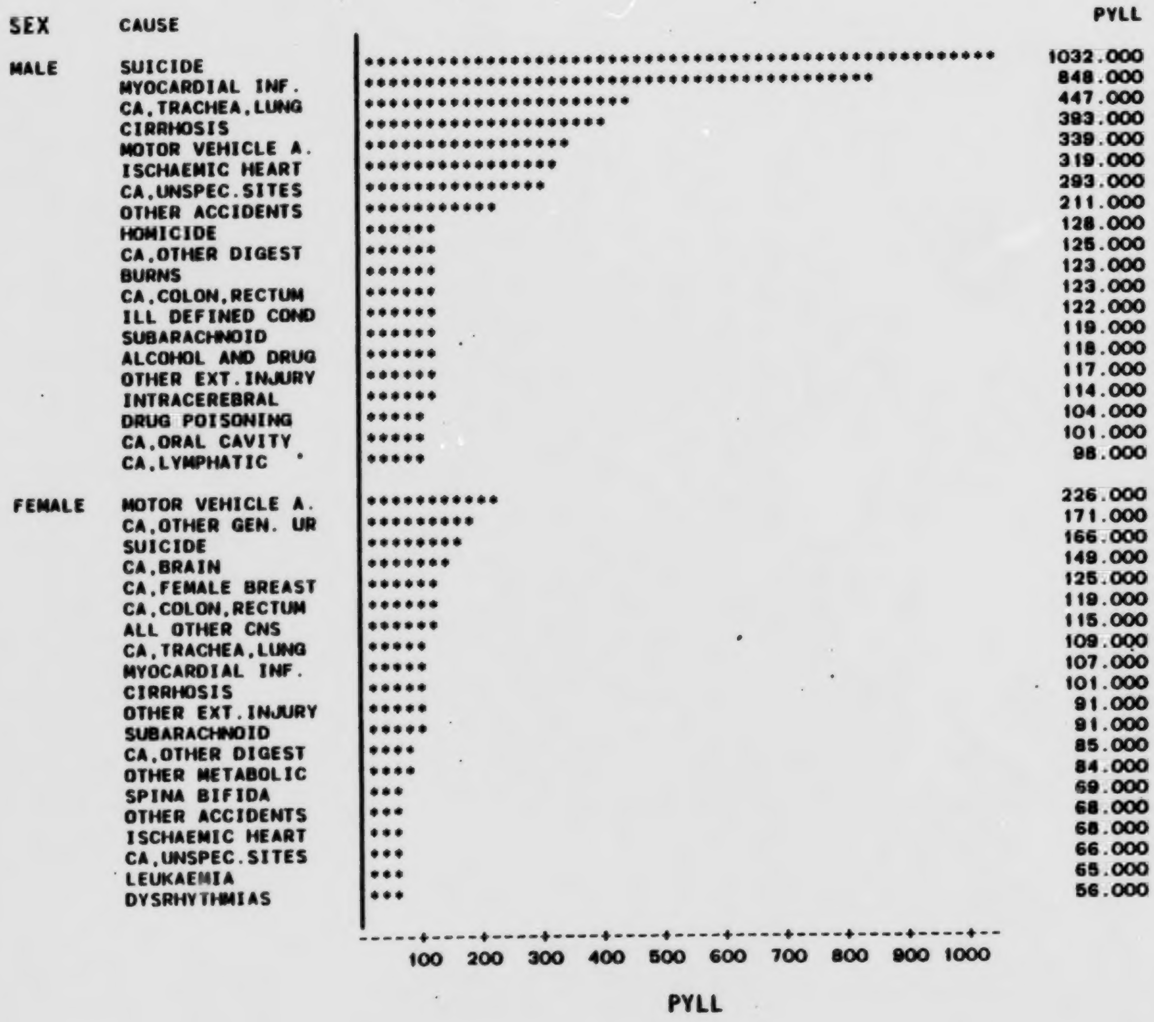


FIGURE 37

NORTHERN HEALTH AREA
POTENTIAL YEARS OF LIFE LOST
BY SEX, 1981

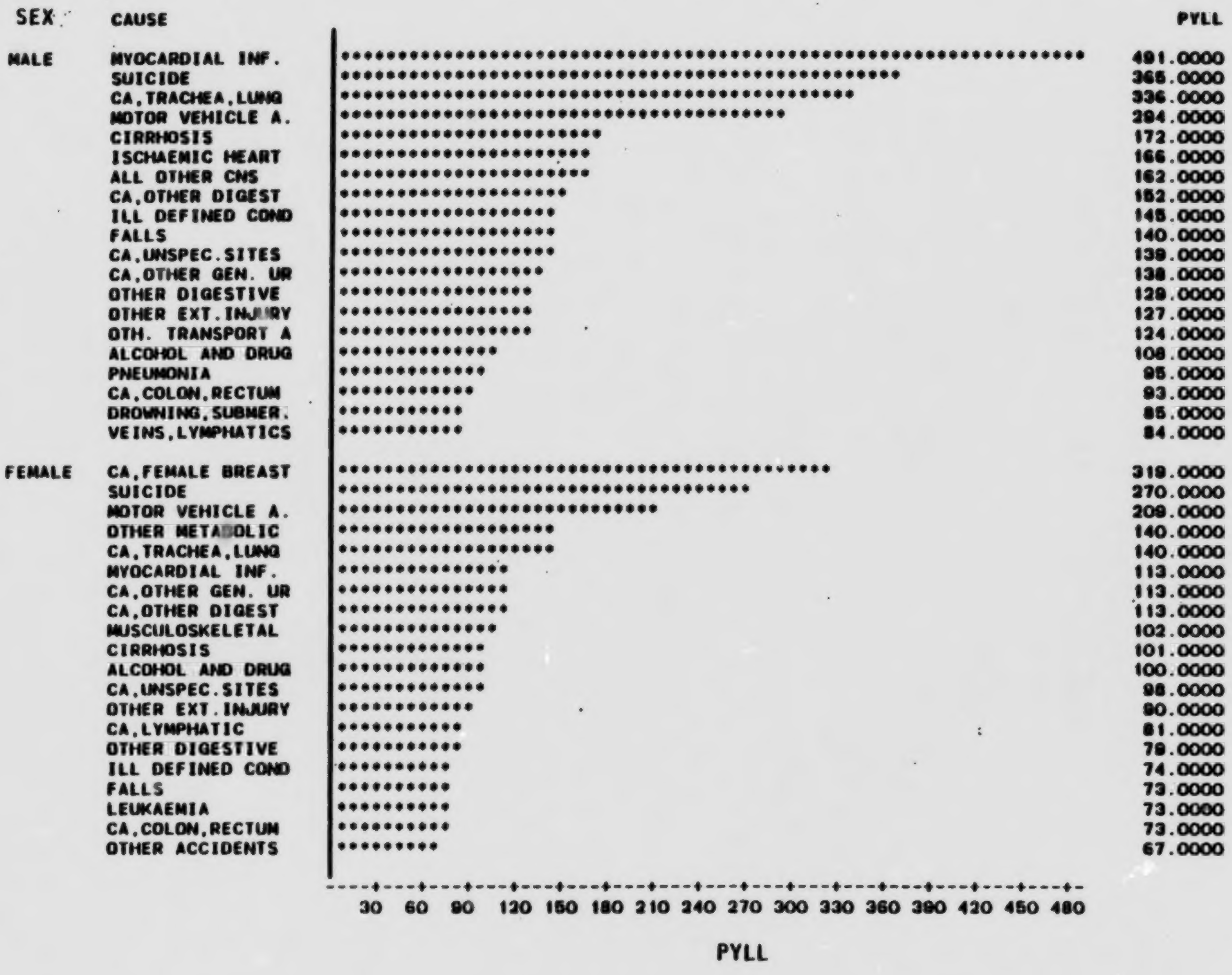
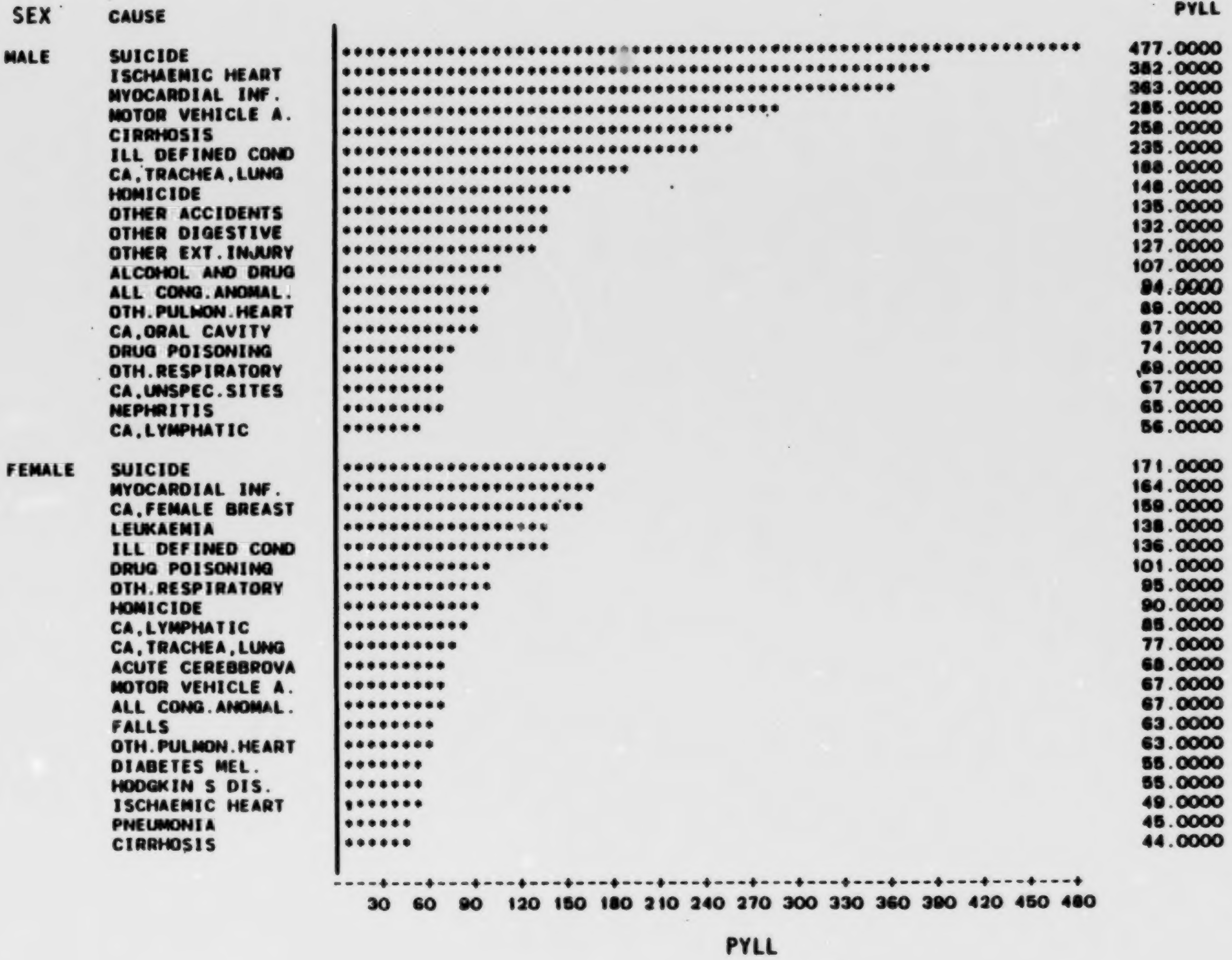


FIGURE 38

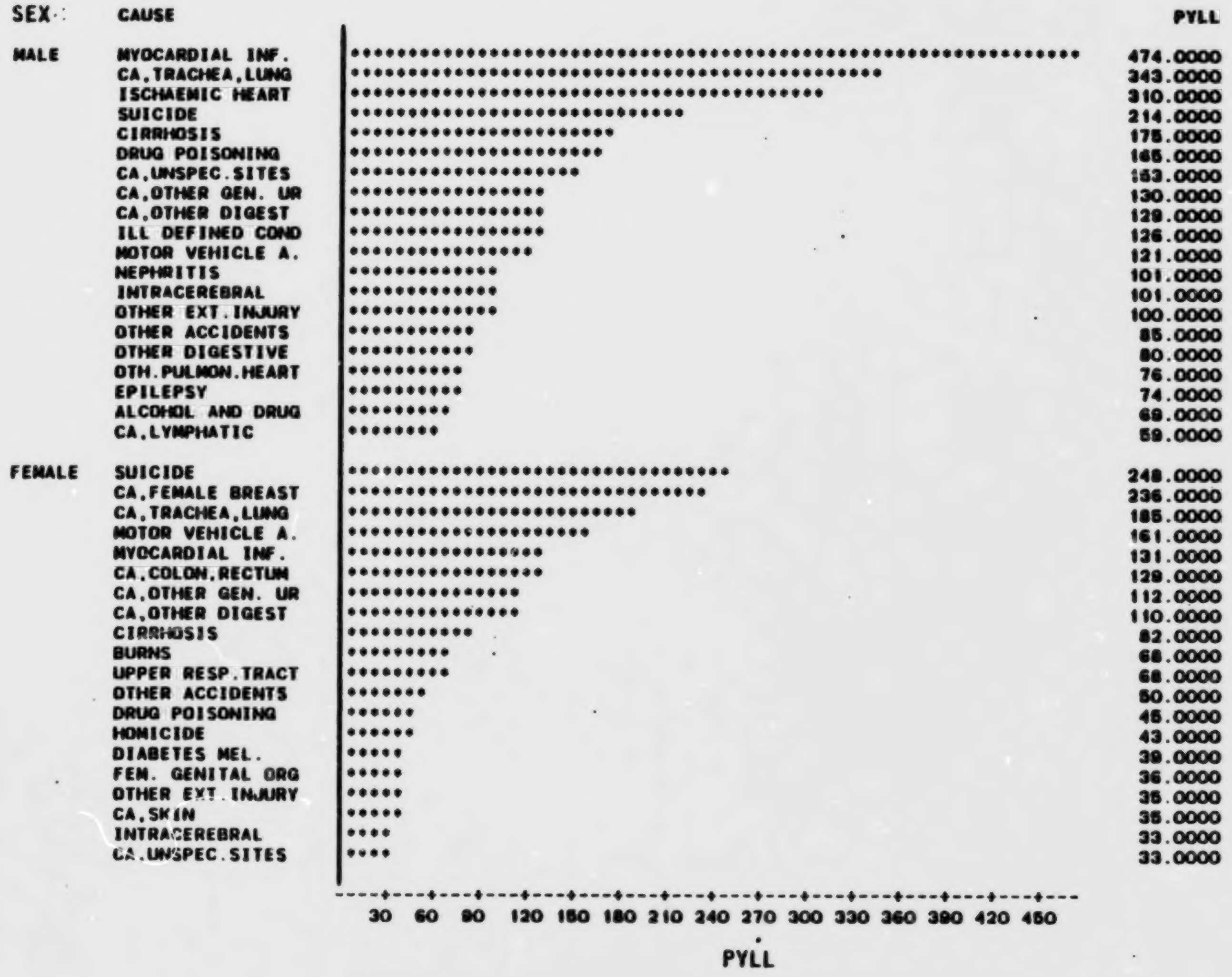
DOWNTOWN HEALTH AREA
POTENTIAL YEARS OF LIFE LOST
BY SEX, 1981



SEX	CAUSE	PYLL
MALE	SUICIDE	477.0000
	ISCHAEMIC HEART	382.0000
	MYOCARDIAL INF.	363.0000
	MOTOR VEHICLE A.	285.0000
	CIRRHOSIS	258.0000
	ILL DEFINED COND	235.0000
	CA,TRACHEA,LUNG	188.0000
	HOMICIDE	148.0000
	OTHER ACCIDENTS	135.0000
	OTHER DIGESTIVE	132.0000
	OTHER EXT.INJURY	127.0000
	ALCOHOL AND DRUG	107.0000
	ALL CONG.ANOMAL.	94.0000
	OTH.PULMON.HEART	89.0000
	CA,ORAL CAVITY	87.0000
	DRUG POISONING	74.0000
	OTH.RESPIRATORY	69.0000
	CA,UNSPEC.SITES	67.0000
	NEPHRITIS	65.0000
	CA,LYMPHATIC	56.0000
FEMALE	SUICIDE	171.0000
	MYOCARDIAL INF.	164.0000
	CA,FEMALE BREAST	159.0000
	LEUKAEMIA	138.0000
	ILL DEFINED COND	136.0000
	DRUG POISONING	101.0000
	OTH.RESPIRATORY	95.0000
	HOMICIDE	90.0000
	CA,LYMPHATIC	85.0000
	CA,TRACHEA,LUNG	77.0000
	ACUTE CEREBBROVA	68.0000
	MOTOR VEHICLE A.	67.0000
	ALL CONG.ANOMAL.	67.0000
	FALLS	63.0000
	OTH.PULMON.HEART	63.0000
	DIABETES MEL.	55.0000
	HODGKIN S DIS.	55.0000
	ISCHAEMIC HEART	49.0000
	PNEUMONIA	45.0000
	CIRRHOSIS	44.0000

FIGURE 39

EASTERN HEALTH AREA
POTENTIAL YEARS OF LIFE LOST
BY SEX, 1981



b. Ischaemic heart disease, which was number one for females in Figure 31 has become number 17 according to PYLL.

c. Suicide was the fourth leading cause of death in males in the WHA (Figure 31), but according to PYLL, it now ranks number 1 in males.

d. Cirrhosis in males ranked number 4 according to PYLL in 1981. However, according to the number of deaths from cirrhosis (Figure 31), cirrhosis was number 11.

These kinds of comparisons can be made for the other three Health Areas as well. In general, however, it can be said that the examination of PYLL puts an entirely different perspective on the importance of a particular health problem because PYLL takes into consideration the age at which a death occurs.

In order to further explain the different perspective the PYLL statistic can give, Table 33 compares the percent of deaths in each Health Area with the percent of total PYLL.

It can be seen that in every Health Area the percent PYLL is two to four times higher than the percent of deaths for motor vehicle accident and suicide. These causes of death occur at young ages and therefore contribute more weight to the PYLL.

Table 33: Comparison of % Deaths* and % PYLL* for Selected Causes of Death by Area.

	WHA		NHA		DHA		EHA		City	
Cause of Death	% Deaths	% PYLL	% Deaths	% PYLL	% Deaths	% PYLL	% Deaths	% PYLL	% Deaths	% PYLL
myocardial infarction	14.2	10.1	12.7	7.5	11.5	8.1	13.9	9.6	13.2	8.9
ischaemic heart disease	5.6	4.1	6.0	2.8	10.1	6.6	7.0	5.4	7.0	4.5
cirrhosis	4.8	5.2	2.5	3.4	4.8	4.7	4.9	4.1	4.2	4.4
lung cancer	8.1	5.9	9.3	5.9	6.0	4.1	10.6	8.4	8.5	6.0
motor vehicle accident	3.0	6.0	2.5	6.5	2.4	5.4	1.4	4.5	2.4	5.7
suicide	6.8	12.6	4.2	7.8	4.8	10.0	3.3	7.3	4.9	9.7
all causes	30.7	31.2	26.4	26.7	21.2	21.4	21.7	20.8	100.0	100.0

* between the ages of 1 and 70.

4. Standardized Mortality Ratio (SMR)

The SMR for a particular Health Area is a statistic which compares the observed number of deaths in the Area, for a specific cause of death and sex, with the number to be expected if the age-, sex-, cause-specific death rates for the Ontario population occurred in that Health Area (6). It allows a comparison of the mortality experience in the Areas with the Province as a whole. If the SMR is less than 1.0, then the Health Area is having fewer deaths than one would expect, based on Ontario data. Thus the Health Area is "healthier" than expected. If the SMR is greater than 1.0, then the reverse is true.

The SMR is an important statistic for setting priorities in the Department. In addition, it can be used to generate further hypotheses; i.e. once it is seen that the SMR is significantly higher for a particular cause of death, it is necessary to determine why that may be the case.

Tables 34 and 35, and Figures 40 to 47 show the SMR's for selected causes of death. It can be seen that for males, the cirrhosis rate in each of the Health Areas except the North was greater than expected. Cirrhosis rates in WHA males were more than 1 1/2 times greater than one would expect if the WHA had experienced the provincial rates, while rates in the DHA were almost 2 1/2 times greater.

Table 34: 1981 Standardized Mortality Ratios For Males, by Health Area, Compared to Ontario Males.

Cause of Death	WHA	NHA	DHA	EHA	City
Acute Cerebrovascular	0.97	0.70	0.93	0.80	0.91
Ischaemic Heart Disease	0.56*	0.59*	0.88	0.58*	0.68*
Myocardial Infarction	0.77*	0.60*	0.59*	0.63*	0.65*
Cirrhosis	1.60*	0.70	2.37*	1.69*	1.41*
Lung Cancer	1.07	0.82	1.12	1.18	1.01
Motor Vehicle Accident	0.62	0.38*	0.82	0.26*	0.50*
Suicide	2.23*	0.70	1.51	0.58	1.25*
All Causes	0.91*	0.72*	1.00	0.84*	0.89*

* significantly different from 1.0.

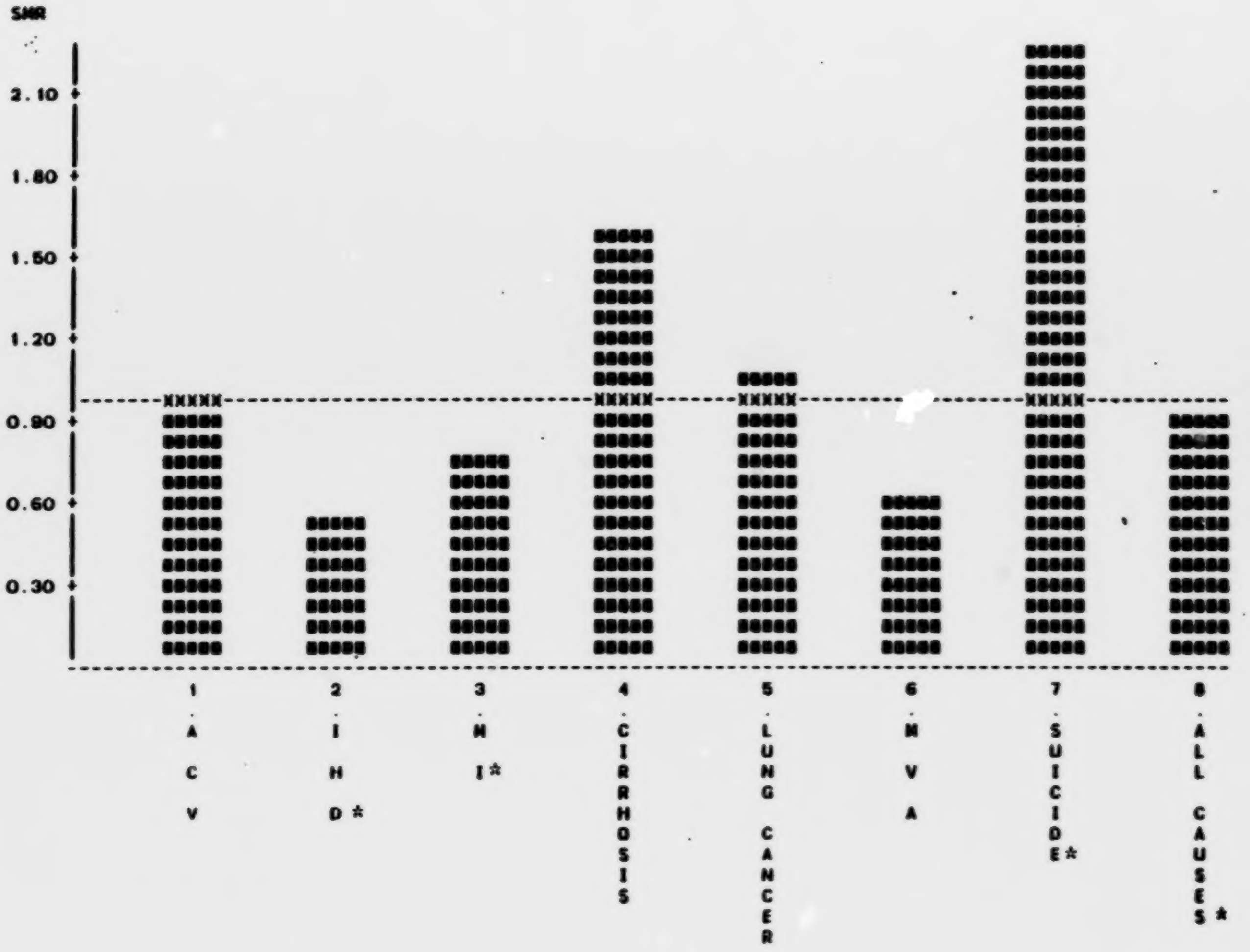
Table 35: 1981 Standardized Mortality Ratios For Females by Health Area, Compared to Ontario Females.

Cause of Death	WHA	NHA	DHA	EHA	City
Acute Cerebrovascular	0.82	0.72*	1.02	0.77	0.79*
Ischaemic Heart Disease	0.56*	0.52*	0.87	0.56*	0.58*
Myocardial Infarction	0.64*	0.56*	0.61*	0.72*	0.62*
Cirrhosis	1.29	0.63	1.96	1.44	1.14
Lung Cancer	1.10	1.02	1.40	1.30	1.15
Breast Cancer	0.89	0.83	0.77	0.85	0.84
Motor Vehicle Accidents	1.07	0.56	0.21	0.61	0.65*
Suicide	0.94	1.04	1.40	2.04*	1.31
All Causes	0.79*	0.68*	0.89*	0.82*	0.76*

* significantly different from 1.0.

FIGURE 40

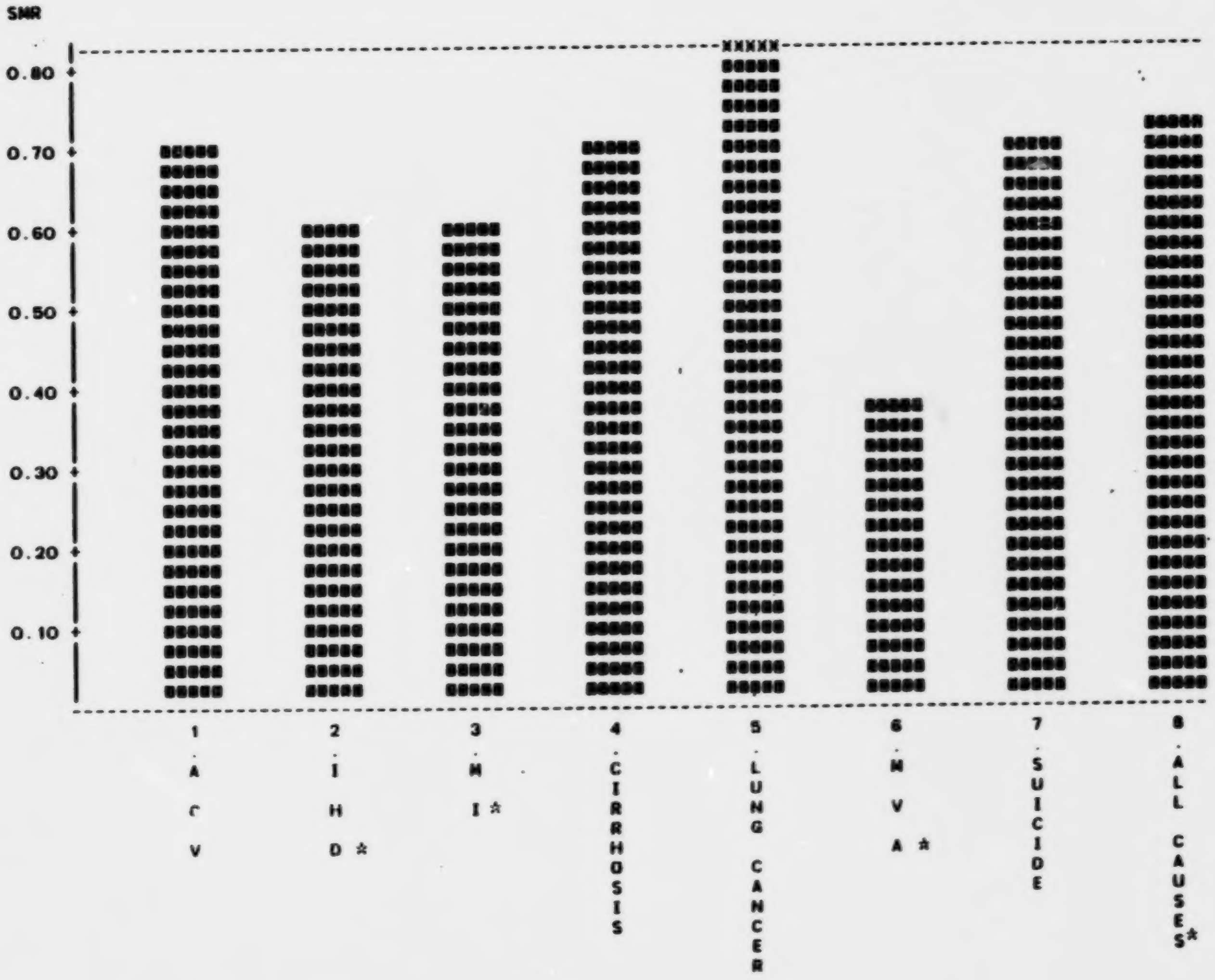
SMR FOR WESTERN HEALTH AREA MALES
COMPARED TO THE PROVINCE OF ONTARIO, 1981



* Significantly different from 1.0

FIGURE 41

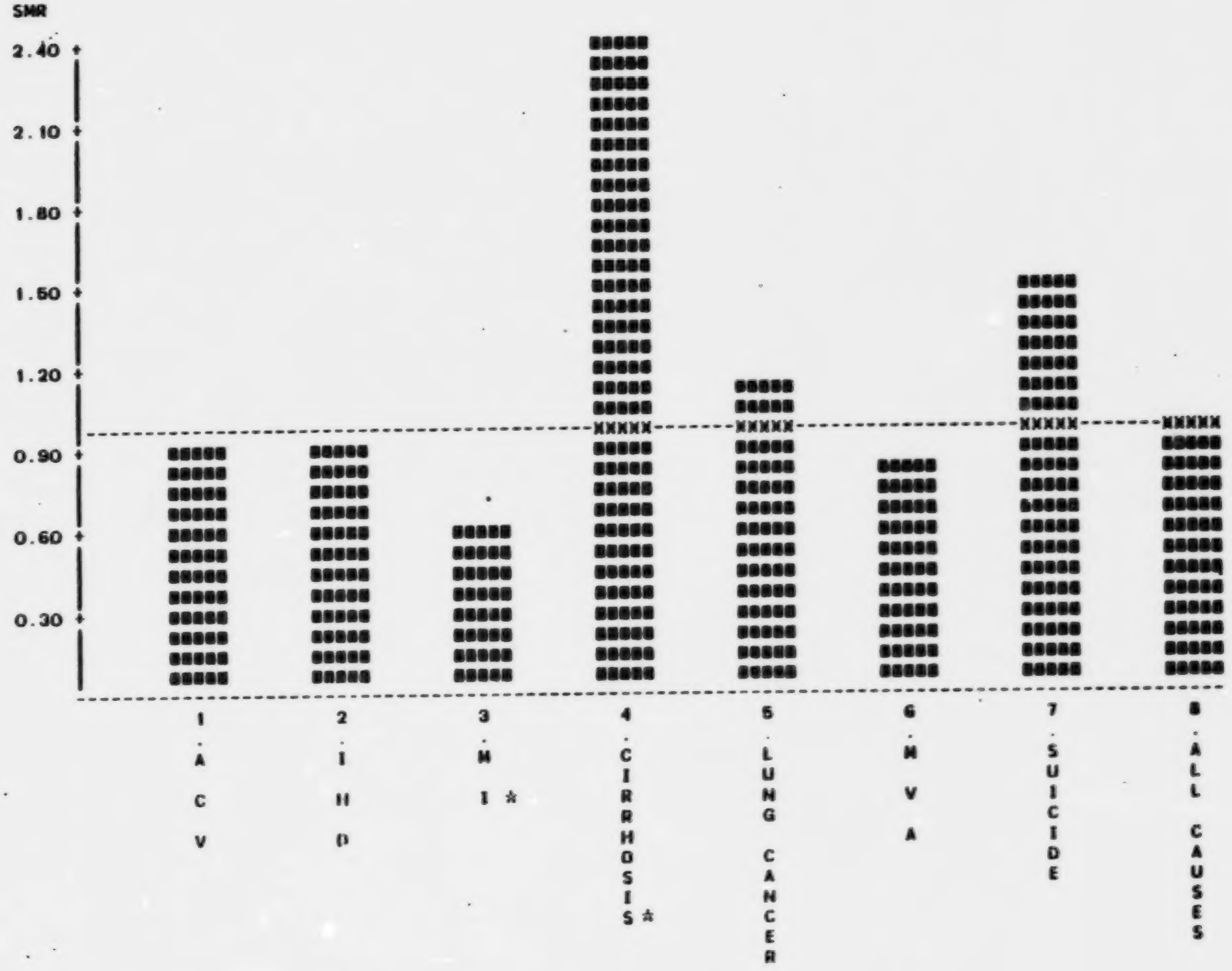
SMR FOR NORTHERN HEALTH AREA MALES
COMPARED TO THE PROVINCE OF ONTARIO, 1981



* Significantly different from 1.0

FIGURE 42

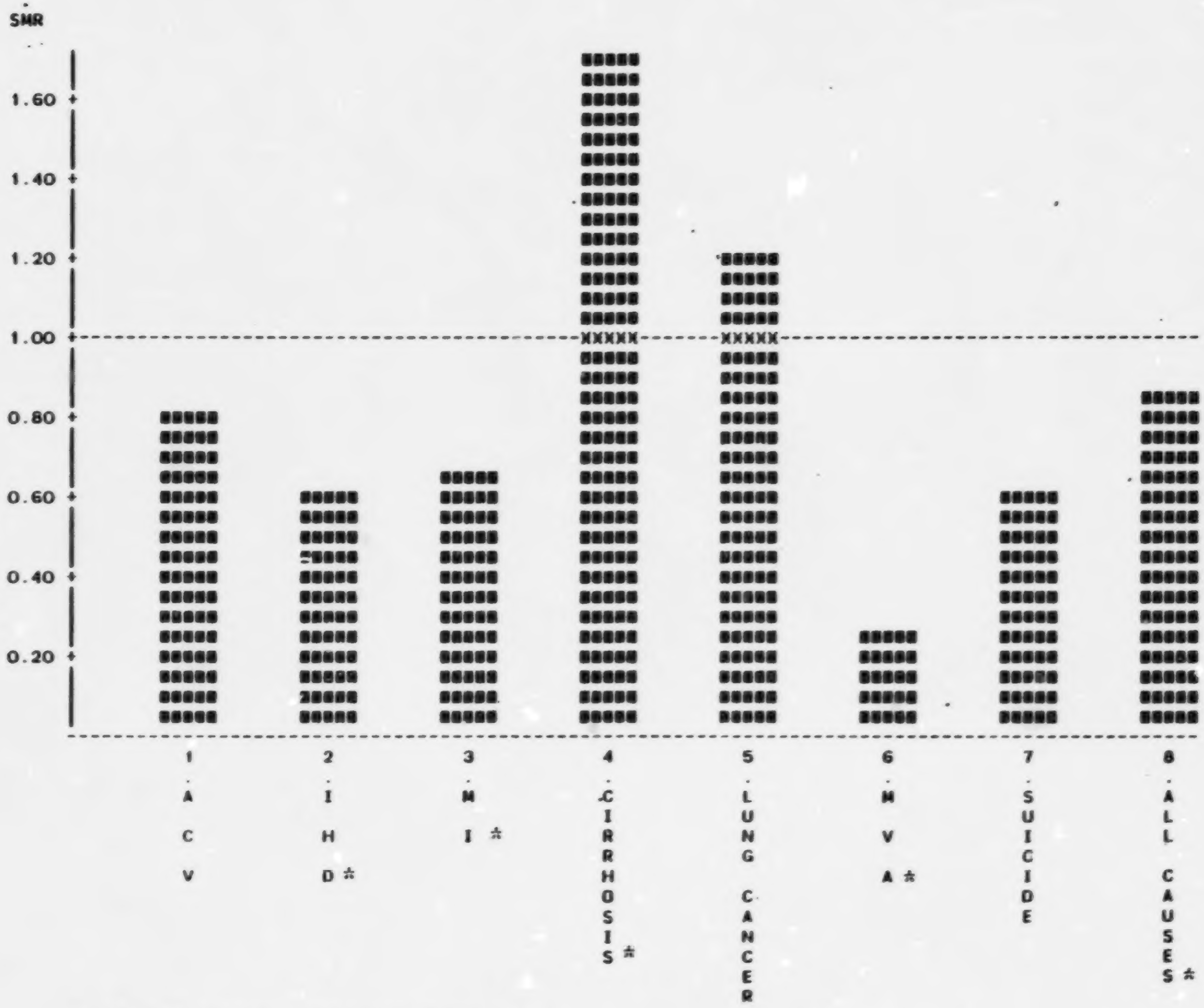
SMR FOR DOWNTOWN HEALTH AREA MALES
COMPARED TO THE PROVINCE OF ONTARIO, 1981



* Significantly different from 1.0

FIGURE 43

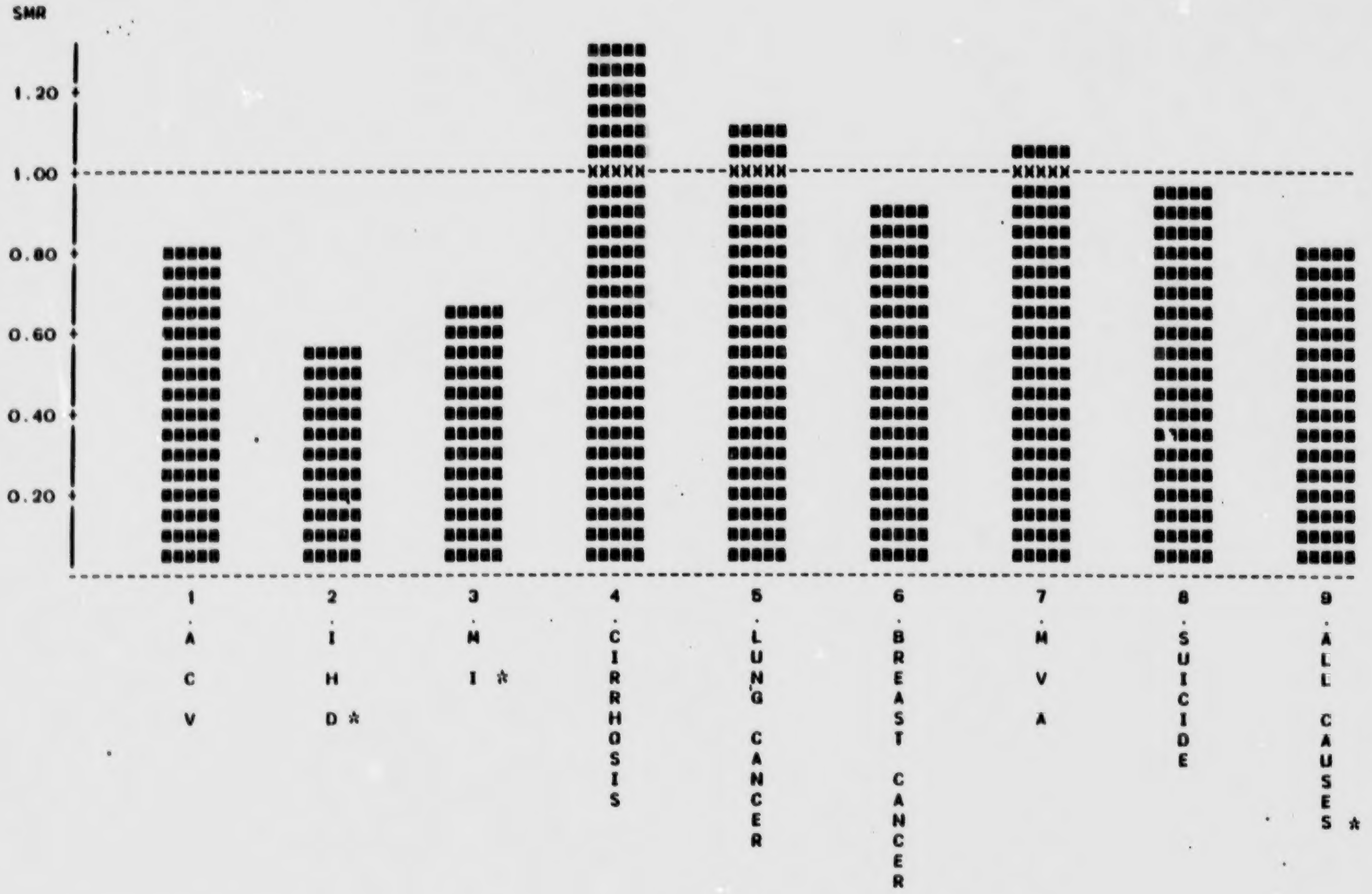
SMR FOR EASTERN HEALTH AREA MALES
COMPARED TO THE PROVINCE OF ONTARIO, 1981



* Significantly different from 1.0

FIGURE 44

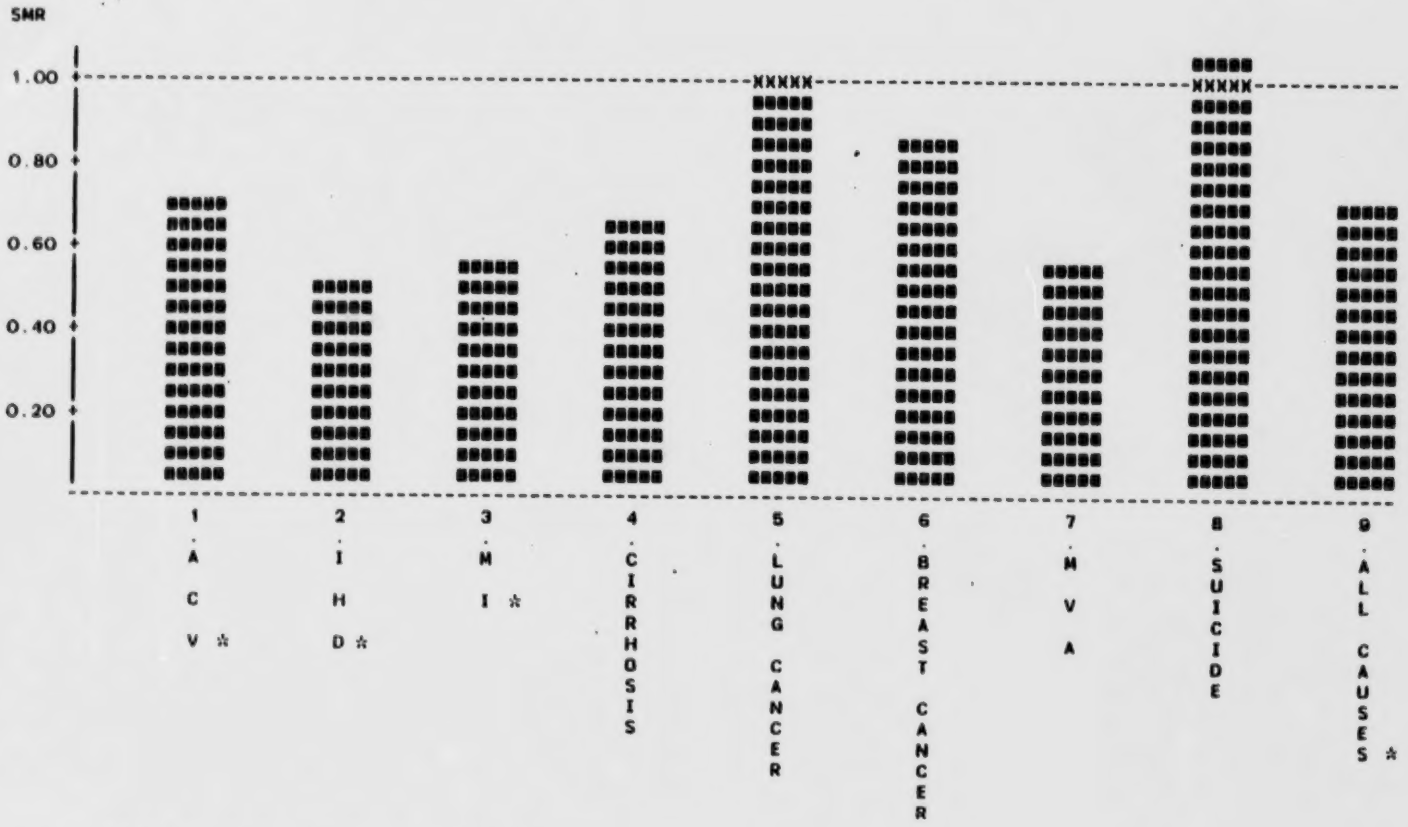
SMR FOR WESTERN HEALTH AREA FEMALES
COMPARED TO THE PROVINCE OF ONTARIO, 1981



* Significantly different from 1.0

FIGURE 45

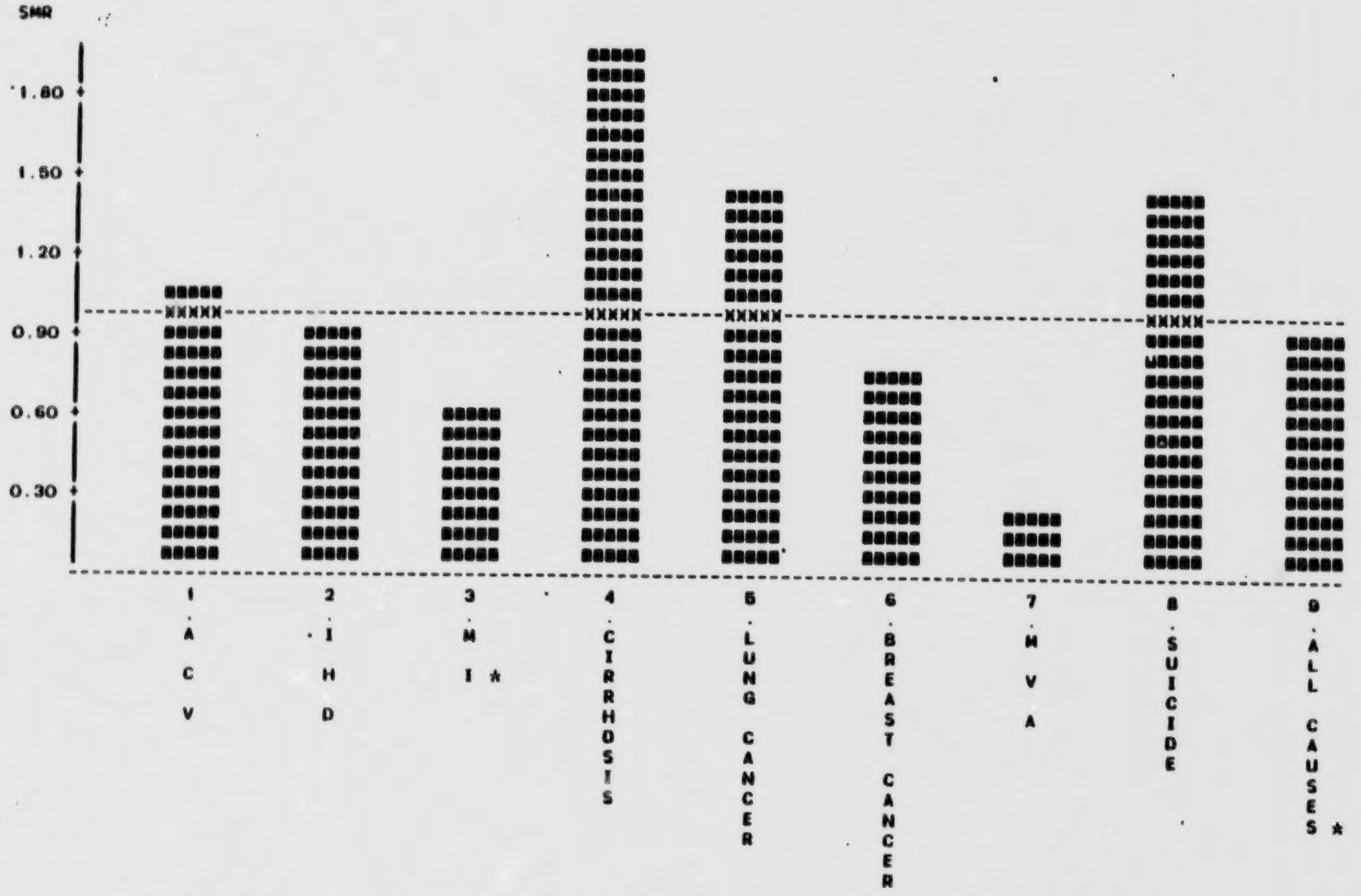
SMR FOR NORTHERN HEALTH AREA FEMALES
COMPARED TO THE PROVINCE OF ONTARIO, 1981



* Significantly different from 1.0

FIGURE 46

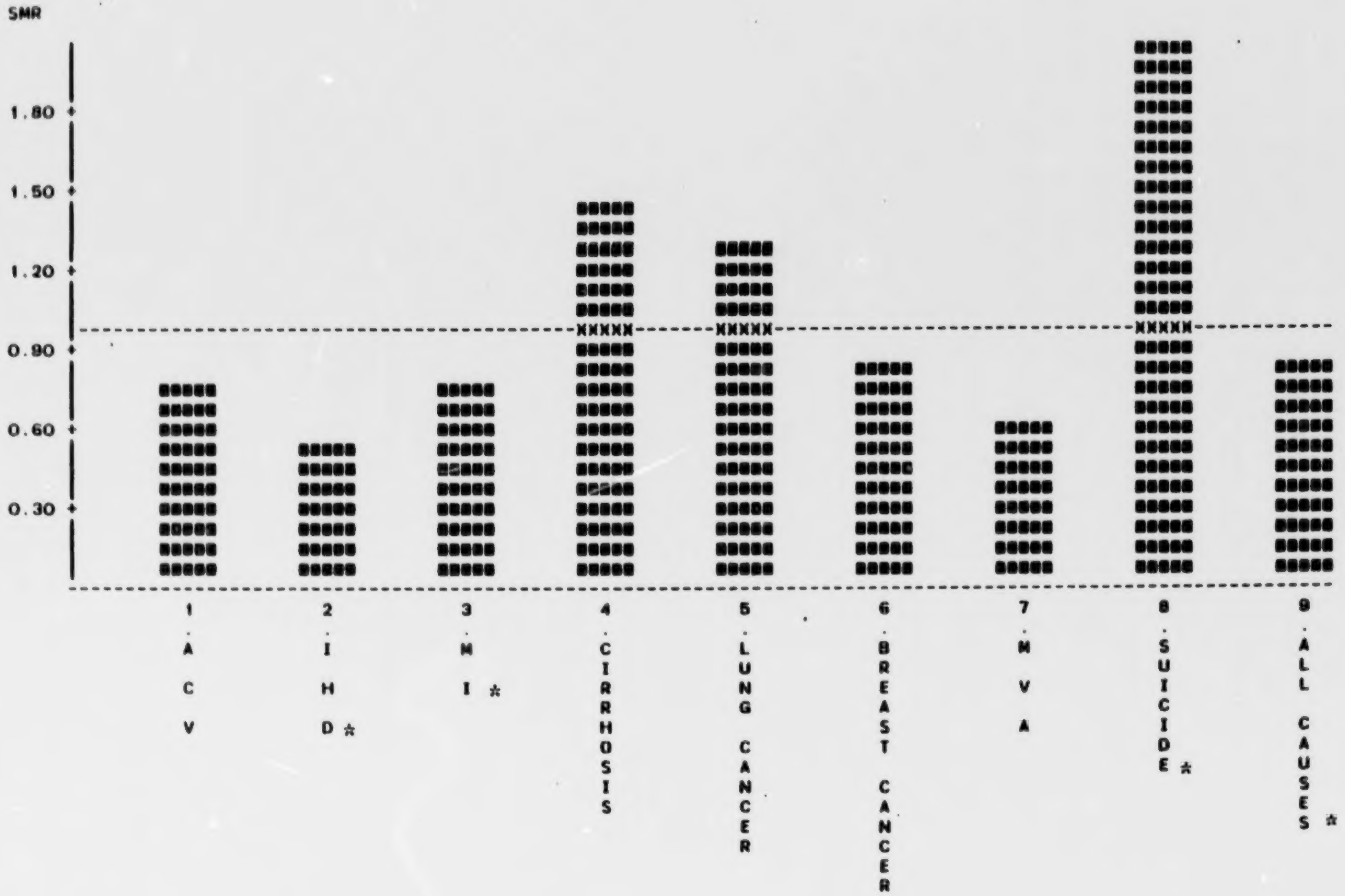
SMR FOR DOWNTOWN HEALTH AREA FEMALES
COMPARED TO THE PROVINCE OF ONTARIO, 1981



* Significantly different from 1.0

FIGURE 47

SMR FOR EASTERN HEALTH AREA FEMALES
COMPARED TO THE PROVINCE OF ONTARIO, 1981



* Significantly different from 1.0

In addition, male suicide in the WHA was almost 2-1/4 times that expected based on provincial data. The SMR's for the other causes of death in each of the four Health Areas were around 1.0 or lower. The EHA experienced approximately one-fourth the motor vehicle accident mortality expected to occur, while the NHA had less than one-half the expected deaths from motor vehicle accidents.

In females, it can be seen that the SMR's are about 1.0 or less for many of the selected causes of death in every Health Area. However, NHA females had lower mortality than expected for all causes combined, acute cerebrovascular disease, ischaemic heart disease and myocardial infarction.

In the DHA the SMR for all causes of death and for myocardial infarction was less than 1.0. On the other hand, female suicides in the EHA were two times greater than expected, based on provincial statistics.

Statistical significance was tested on all SMR's by calculating a z-statistic (J.Hsieh, unpublished).

VI. PROGRAM PLANNING FOR THE HEALTH AREAS

A. Introduction

The following section will discuss the implications of the data in order to continue and augment the planning process already begun in the City of Toronto Department of Public Health. The format for this section will be to discuss each Health Area separately.

Before proceeding, it is important to mention that the data presented in this report do not provide a total picture for each Health Area. There are other kinds of data (e.g. smoking, alcohol intake, drug usage, and community morbidity) which are important health indicators, and efforts must be made to acquire these data at the community level. On the other hand, we should not wait until these data are available before planning programs, especially since important conclusions can be drawn using the information we already have.

It is also important to consider the data presented in this report in their proper perspective. It should be remembered that a certain Area may have high fertility rates, a high percent of low birthweight babies, or high mortality rates compared to the other Areas. These rates, however, may be well below the rates for other jurisdictions, or within what is considered to be a normal range.

Two tables are provided to summarize some of the important information presented in this report. Table 36 is a summary of key health indicators for each of the four Health Areas and the City. Appendix 13 is a more detailed summary of results by Health Area.

B. Western Health Area

Perhaps the most striking statistic for the WHA is that 54.3% of its population have a non-English language as a mother tongue. In addition, 64.0% of the Portuguese population in the City of Toronto live in the WHA.

Although the data do not indicate the percent of the non-English-speaking population, or the percent of recent immigrants, the implications are clear enough. Delivery of services in this Area should not neglect the Portuguese population, and staff must be prepared to deal with the population in ways which are appropriate to its ethnic and social mores. In addition, the majority of promotional materials could be written in other languages, particularly Portuguese.

As indicated by population pyramids and census data, the WHA has a relatively young population. Six percent of

Table 36: Summary of Health Indicators by Health Area, 1981.

Indicator	WHA	NHA	DHA	EHA	City
Population*	163,970	221,121	87,035	127,385	599,511
% non-English as a mother tongue	54.3	31.4	33.3	29.0	37.5
Stillbirth rate+	6.7	6.5	6.7	6.4	6.6
Mean gestational age	39.3	39.3	39.2	39.3	39.3
% LBW babies	5.5	5.9	6.4	6.8	6.1
% high birthweight	1.4	1.6	0.96	1.4	1.4
Mean age of mother	26.9	28.5	27.1	27.0	27.4
% teenage births	8.7	4.9	10.3	8.7	7.8
% births to mothers 40+ years	1.6	1.7	1.1	0.7	1.3
Infant mortality rate**	8.0	10.0	11.5	5.4	8.4
Perinatal mortality rate++	10.8	10.8	12.3	8.0	10.2
General death rate***	8.6	7.8	9.8	8.6	8.4
Age standardized mortality rate (all causes)+++	673.9	519.5	804.8	656.3	---

(Cont'd)

Table 36: Summary of Health Indicators by Health Area, 1981. (Cont'd)

Indicator	WHA	NHA	DHA	EHA	City
Mean age at death	69.2	73.6	67.3	70.8	70.7
Standardized Mortality Ratios (all causes)					
Males	0.91	0.72	1.00	0.84	0.89
Females	0.79	0.68	0.89	0.82	0.76

* based on 1981 Canada Census.

+ stillbirths of 20 plus weeks' gestation per 1,000 live births.

** deaths under 1 year per 1,000 live births.

++ stillbirths 28 plus weeks' gestation, plus deaths under 1 week, per 1,000 livebirths and stillbirths.

*** deaths per 1,000 population (census).

+++ per 100,000 population.

its population is under the age of four, and this is the highest percent of all the Areas. It would seem, therefore, that immunization should be a major emphasis in the WHA, particularly in immigrant groups. Although the Compulsory Immunization Legislation is concentrating on school age children, efforts could also be stepped up for pre-schoolers.

In 1981, 31.5% of all City births occurred among WHA mothers. In addition, the teenage fertility rate was the second highest of the Areas (36.8 per 1,000 girls). Family planning for teenagers, therefore, is especially important, and post-natal visits likely will encompass a good deal of nursing time. On the other hand, post-natal visits provide the perfect opportunity for educating mothers about immunization, and follow-up visits to new immigrants could do much to increase immunization in the WHA.

Compared to the City mean, the WHA had a significantly lower mean age at death for males and for both sexes combined. One explanation for this could be the high rates of suicide and cirrhosis among WHA males. These diseases are occurring at relatively young ages, and in fact, both diseases rank within the top ten causes of death according to PYLL. Moreover, the WHA experienced higher rates of suicide and cirrhosis in males compared to the province as a whole.

The challenge to the WHA, therefore, should be clear. The means to meet the challenge, unfortunately, are less clear. Programs on suicide prevention and the reduction of alcohol intake have met with mixed success in other jurisdictions. Nevertheless, there seems to be a need in the WHA for mental health programs in these areas, as well as primary prevention programs in the schools where these issues can be addressed.

C. Northern Health Area

Compared to the other Areas, the NHA has the distinction of having the lowest percent of single and teenage mothers, the lowest general death rate, the lowest age standardized mortality rate for all causes and many specific causes, and the highest mean age at death. Despite this apparent good health, however, there are a number of special needs in the NHA and these will be discussed below. In addition, more than in any other Health Area, there are two distinct populations in the NHA: 1) the affluent, well-educated resident in the north/central part of the Area known as North Toronto; and 2) the lower or working class resident living in the western part of the NHA, Hillcrest.

These highly disparate sub-groups have vastly different health needs, and the NHA currently is attempting to uncover the health problems for the two groups. Because the data presented in this report encompass the entire NHA, it should be remembered that some problems may be diluted or totally hidden because the two sub-groups are not analyzed separately.

What becomes immediately apparent, however, is that the NHA has the largest population of all the Health Areas. Of more importance is the fact that 10.1% of its population is older than seventy years of age. It appears, therefore, that dental health, retirement programs, and other programs related to the elderly could be stressed in this Area.

Like the WHA, the NHA also has high concentrations of its population with mother tongue other than English. This is most apparent in Hillcrest, and particularly the case for the Italian mother tongue. 58.6% of the Italian population lives in the NHA, and this population is concentrated in the Hillcrest Area. The implications are analogous to those for the WHA: attention to Italian customs, and promotional materials in the Italian language.

More than any other Health Area, the NHA had older mothers and heavier babies. The mean age of mothers in the north was 28.5 years, and in the NHA 11.7% of first births were to mothers older than 35 years of age. It may be that the older mothers are the more affluent career women who have delayed childbirth. On the other hand, these mothers and their babies have specific health needs which are related to pregnancy, as well as to the particular stress-related problems of working mothers. All of these health problems can be addressed by the health department in the North.

As for high birthweight babies, it should be noted that the differnce between the NHA and the City was not statistically significant. An analysis of Hillcrest and North Toronto separately, however, might unmask a particular problem. On the other hand, numbers will be small, and conclusions will have to be drawn with caution.

Like all the other Health Areas, heart disease was a major cause of death in the NHA. This is not surprising since NHA residents died at an older age compared to the rest of the City. On the other hand, suicide in both sexes, cirrhosis in males, and breast cancer in females were all in the top ten leading causes of death when ranked according to PYLL.

Breast cancer may be a particular problem in the NHA because the risk of disease is higher in urban, upper-middle class women, and in women with a late age at first pregnancy (6). Breast self-examination programs and identification of high risk women might be useful directions for the NHA.

D. Downtown Health Area

While the DHA has the smallest residential population, it also has the largest visitor population to its clinics, hospitals, restaurants and entertainment establishments. This report does not deal with the non-residential population of the DHA. Yet, it should be remembered that much of the work done by the DHA relates to these establishments and facilities.

The DHA can be characterized by a number of demographic factors: 1) 38% of its population is 20-34 years of age; 2) there are high concentrations of single parent families; and 3) the socio-economic status of certain sections of the DHA is particularly low compared to the rest of the City. Although this last factor was not analyzed in this report, it is likely that the low income level in the DHA accounts for many of the health problems in the Area.

The other important demographic factor worth noting in the DHA is the large proportion of Chinese. 33.6% of the Chinese population in the City live in the DHA. Many of these residents are new immigrants, and may need attention in such areas as communicable disease and gaining access to the Canadian health care system.

Since the DHA has the smallest population, it is not surprising that it had the lowest proportion of births of all the Health Areas (only 13.8% of all City births). On the other hand, the DHA had the highest fertility rate in 15-19 year olds, and 20.6% of all live births were to single mothers (this was significantly higher than for the City as a whole). Again, family planning services in this Area should be emphasized, as well as prenatal programs for high risk women (e.g. the Department's Healthiest Babies Possible program). This is particularly important when one considers that half the census tracts with a high percent of low birthweight babies (the 90th percentile) were in the DHA.

Many studies have examined the positive relationship between low income level and poor health (7), and the mortality data for the DHA may be providing another substantiation of this relationship. Compared to the other Health Areas, the DHA had a significantly lower mean age at death for males, females, and both sexes combined. Moreover, the age-standardized rates for ischaemic heart disease and all causes were significantly higher in both males and females. The age-standardized rates of a number of other diseases were also shown to be highest in the DHA.

Although a number of explanations for the relationship between poverty and health can be proposed, only a few have direct relevance to programs for the Department of Public Health. Nutrition and smoking are obvious explanations, since nutrition is known to be poor and smoking is sometimes thought to be more prevalent in low income or less educated groups. Besides these factors, better access to good health care may reduce mortality at younger ages or for certain diseases in the DHA. This is a very complex issue and is related not only to income, but also to a person's perception of unhealthy symptoms and expectations of good health. Nevertheless, it is an issue that the DHA could begin to tackle in order to reduce some of its mortality rates.

E. Eastern Health Area

The EHA was created as a pilot for decentralization of the health department in November, 1981. After a hectic beginning, the EHA now has the advantage of being a well-established organization. The planning process in the EHA is well underway. Nevertheless, a comparison with the other Health Areas and to the City can be useful for future program planning.

The EHA has the highest proportion of English-speaking residents in the City (71.0%). Having said that, it should also be noted that 36.3% of the Chinese population (more than the DHA) live in the EHA. In addition, a few of the census tracts along Danforth Avenue, on the north end of the EHA, have high concentrations of residents with a mother tongue other than English. These census tracts predominantly contain Greek residents. Therefore, the two ethnic groups of interest in the EHA are quite different and require different strategies.

Also of note in the EHA is the high concentration of single parent families and of teenage mothers. The new family planning clinic established jointly with the South Riverdale Community Health Centre can do much to improve this situation. Yet it is important to examine other demographic characteristics of single parents and teenage mothers (e.g. ethnic group) to gain some insight into the particular target groups to attract to the clinic.

There are few surprises in mortality for the EHA, although the infant mortality rate is the lowest of all the Areas. The mean age at death is the same as the City's for males, females and both sexes combined, and like the other Areas, heart disease, lung cancer and breast cancer are important diseases. Finally, both cirrhosis in males and suicide in females are significantly higher compared to the province. Since cirrhosis and suicide are important diseases in each of the four Health Areas, it is possible that centrally coordinated programs in these areas, with Area-specific methodology, could be a productive approach for success.

VII. REFERENCES

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VIII. APPENDICES

APPENDIX 1

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****************************************************************
*****                                                      *****
****           CAUSE OF DEATH CODES                         ****
***        ICD9 AND THE AGGREGATED GROUP OF 127              ***
****         PROGRAM - HLH1.JCL.CNTL(PRINT2)                ****
*****          DATA - HLH1.DOC.DATA(ICD9)                  *****
****************************************************************

          ICD9 CODE                                   ONTARIO CODES
---------------------------------------------+----------------------------
01 CHOLERA                                   |  1.INTESTINAL INFECTIONS
02 TYPHOID AND PARATYPHOID                   |
03 OTHER SALMONELLA INFECTIONS               |
04 SHIGELLOSIS                               |
05 OTHER FOOD POISONING(BACTERIAL)           |
06 AMOEBIASIS                                |
07 OTHER PROTOZOAL INTESTINAL DISEASES       |
08 INTESTINAL INFECTIONS - OTHER ORGANISMS   |
---------------------------------------------+----------------------------
09 ILL-DEFINED INTESTINAL INFECTIONS         |  2.TUBERCULOSIS
10 PRIMARY TUBERCULOUS INFECTION             |
11 PULMONARY TUBERCULOSIS                    |
12 OTHER RESPIRATORY TUBERCULOSIS            |
13 T B MENINGES & CENTRAL NERVOUS SYSTEM     |
14 T B INTESTINES,PERITONEUM,MESENT GLANDS   |
15 TUBERCULOSIS OF BONES & JOINTS            |
16 TUBERCULOSIS OF GENITOURINARY SYSTEM      |
17 TUBERCULOSIS OF OTHER ORGANS              |
18 MILIARY TUBERCULOSIS                      |
---------------------------------------------+----------------------------
20 PLAGUE                                    |  4.OTHER BACTERIAL INFECT
21 TULARAEMIA                                |
22 ANTHRAX                                   |
23 BRUCELLOSIS                               |
24 GLANDERS                                  |
25 MELIOIDOSIS                               |
26 RAT-BITE FEVER                            |
27 OTHER ZOONOTOIC BACTERIAL DISEASES        |
30 LEPROSY                                   |
31 DISEASES DUE TO OTHER MYOBACTERIA         |
32 DIPHTHERIA                                |
33 WHOOPING COUGH                            |
34 STREPTOCOCCAL SORE THROAT AND SCARLATINA  |
35 ERYSIPELAS                                |
---------------------------------------------+----------------------------
36 MENINGOCOCCAL INFECTIONS                  |  3.MENINGIACOCAL INF
---------------------------------------------+----------------------------
37 TETANUS                                   |  4.OTHER BACTERIAL INF
38 SEPTICAEMIA                               |
39 ACTINOMYCOTIC INFECTIONS                  |
40 OTHER BACTERIAL DISEASES                  |
41 BACTERIAL CONDITIONS E & U                |
---------------------------------------------+----------------------------
45 ACUTE POLIOMYELITIS                       |  5.ACUTE POLIO
---------------------------------------------+----------------------------
46 SLOW VIRUS INFECTION OF C N S             |  7.OTHER VIRAL DISEASE
47 MENINGITIS DUE TO ENTEROVIRUS             |
48 OTHER ENTEROVIRUS DISEASES OF C N S       |
49 OTHER NON-ARTHROPOD VIRAL DIS -C N S      |
50 SMALLPOX                                  |
*************************************************************
*****                                                   *****
****              CAUSE OF DEATH CODES                   ****
***       ICD9 AND THE AGGREGATED GROUP OF 127            ***
****          PROGRAM - HLH1.JCL.CNTL(PRINT2)            ****
*****           DATA - HLH1.DOC.DATA(ICD9)              *****
*************************************************************

          ICD9 CODE                                      ONTARIO CODES
 51 COWPOX AND PARAVACCINIA                   |
 52 CHICKENPOX                                |
 53 HERPES ZOSTER                             |
 54 HERPES SIMPLEX                            |
 55 MEASLES                                   |
 56 RUBELLA                                   |
 57 OTHER VIRAL EXANTHEMATA                   |
 60 YELLOW FEVER                              |
 61 DENGUE                                    |
 62 MOSQUITO-BORNE VIRAL ENCEPHALITIS         |
 63 TICK-BORNE VIRAL ENCEPHALITIS             |
 64 VIRAL ENCEPHALITIS-OTHER & UNSPECIFIED    |
 65 ARTHROPOD-BORNE HAEMORRHAGIC FEVER        |
 66 OTHER ARTHROPOD-BORNE VIRAL DISEASES      |
----------------------------------------------+----------------------
 70 VIRAL HEPATITIS                           |  6.VIRAL HEPATITIS
----------------------------------------------+----------------------
 71 RABIES                                    |  7.OTHER VIRAL DISEASE
 72 MUMPS                                     |
 73 ORNITHOSIS                                |
 74 SPECIFIC DISEASES - COCKSACKIE VIRUS      |
 75 INFECTIOUS MONONUCLEOSIS                  |
 76 TRACHOMA                                  |
 77 OTHER CONJUNCTIVA-VIRUSES & CHLAMYDIAE    |
 78 OTHER DISEASES - VIRUSES & CHLAMYDIAE     |
 79 VIRAL CONDITIONS CLASSIFIED E & U         |
----------------------------------------------+----------------------
 80 LOUSE-BORNE (EPIDEMIC) TYPHUS             |  8.ARTHROPOD BORNE
 81 OTHER TYPHUS                              |
 82 TICK-BORNE RICKETTSIOSES                  |
 83 OTHER RICKETTSIOSES                       |
 84 MALARIA                                   |
 85 LEISHMANIASIS                             |
 86 TRYPANOSOMIASIS                           |
 87 RELAPSING FEVER                           |
 88 OTHER ARTHROPOD-BORNE DISEASES            |
----------------------------------------------+----------------------
 90 CONGENITAL SYPHILIS                       |  9.VENEREAL DISEASE
 91 EARLY SYPHILIS, SYMPTOMATIC               |
 92 EARLY SYPHILIS, LATENT                    |
 93 CARDIOVASCULAR SYPHILIS                   |
 94 NEUROSYPHILIS                             |
 95 OTHER LATE SYPHILIS WITH SYMPTOMS         |
 96 LATE SYPHILIS, LATENT                     |
 97 OTHER AND UNSPECIFIED SYPHILIS            |
 98 GONOCOCCAL INFECTIONS                     |
 99 OTHER VENEREAL DISEASES                   |
----------------------------------------------+----------------------
 100 LEPTOSPIROSIS                            |  10.OTHER PARASITIC DIS
 101 VINCENTS ANGINA                          |
 102 YAWS                                     |
***********************************************************
*****                                                 *****
****              CAUSE OF DEATH CODES                 ****
***        ICD9 AND THE AGGREGATED GROUP OF 127         ***
****          PROGRAM - HLH1.JCL.CNTL(PRINT2)          ****
*****            DATA - HLH1.DOC.DATA(ICD9)           *****
***********************************************************

          ICD9 CODE                                    ONTARIO CODES
103 PINTA                                    |
104 OTHER SPIROCHAETAL INFECTION             |
110 DERMATOPHYTOSIS                          |
111 DERMATOMYCOSIS, OTHER AND UNSPECIFIED    |
112 CANDIDIASIS                              |
114 COCCIDIOIDOMYCOSIS                       |
115 HISTOPLASMOSIS                           |
116 BLASTOMYCOTIC INFECTION                  |
117 OTHER MYCOSES                            |
118 OPPORTUNISTIC MYCOSES                    |
120 SCHISTOSOMIASIS (BILHARZIASIS)           |
121 OTHER TREMATODE INFECTIONS               |
122 ECHINOCOCCOSIS                           |
123 OTHER CESTODE INFECTION                  |
124 TRICHINOSIS                              |
125 FILARIAL INFECTION AND DRACONTIASIS      |
126 ANCYLOSTOMIASIS AND NECATORIASIS         |
127 OTHER INTESTINAL HELMINTHIASES           |
128 OTHER AND UNSPECIFIED HELMINTHIASES      |
129 INTESTINAL PARASITISM, UNSPECIFIED       |
130 TOXOPLASMOSIS                            |
131 TRICHOMONIASIS                           |
132 PEDICULOSIS AND PHTHIRUS INFESTATION     |
133 ASCARIASIS                               |
134 OTHER INFESTATION                        |
135 SARCOIDOSIS                              |
136 OTHER INFECT & PARASIT DISEASES          |
137 LATE EFFECTS OF TUBERCULOSIS             |
138 LATE EFFECTS OF ACUTE POLIOMYELITIS      |
139 LATE EFFECTS OF OTHER INF & PARA DIS     |
---------------------------------------------+--------------------------
140 MALIGNANT NEOPLASM OF LIP                |  11.CA ORAL CAVITY
141 MALIGNANT NEOPLASM OF TONGUE             |
142 MALIGNANT NEOPLASM MAJOR SALIVARY GLANDS |
143 MALIGNANT NEOPLASM OF GUM                |
144 MALIGNANT NEOPLASM FLOOR OF MOUTH        |
145 MALIGNANT NEOPLASM OTHER PARTS MOUTH     |
146 MALIGNANT NEOPLASM OF OROPHARYNX         |
147 MALIGNANT NEOPLASM OF NASOPHARYNX        |
148 MALIGNANT NEOPLASM OF HYPOPHARYNX        |
149 M N OTHER LIP, ORAL CAVITY,PHARYNX       |
---------------------------------------------+--------------------------
150 MALIGNANT NEOPLASM OF OESOPHAGUS         |  15.CA OTHER DIGESTIVE
---------------------------------------------+--------------------------
151 MALIGNANT NEOPLASM OF STOMACH            |  12.CA STOMACH
---------------------------------------------+--------------------------
152 M N SMALL INTESTINE, DUODENUM            |  13.CA STOMACH INTESTINE
---------------------------------------------+--------------------------
153 MALIGNANT NEOPLASM OF COLON              |  14.CA COLON RECTUM
154 M N RECTUM, RECTOSIGMOID JUNCTION, ANUS  |
---------------------------------------------+--------------------------
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*************************************************************
*****                                                   *****
****           CAUSE OF DEATH CODES                      ****
***      ICD9 AND THE AGGREGATED GROUP OF 137             ***
****        PROGRAM - HLH1.JCL.CNTL(PRINT3)              ****
*****         DATA - HLH1.DOC.DATA(ICD9)                *****
*************************************************************

        ICD9 CODE                                    ONTARIO CODES
155 M N LIVER, INTRAHEPATIC BILE DUCTS          |  15.CA OTHER DIGESTIVE
156 M N GALLBLADDER,EXTRAHEPATIC BILE DUCTS     |
157 MALIGNANT NEOPLASM OF PANCREAS              |
158 M N RETROPERITONEUM, PERITONEUM             |
159 M N OTHER DIGESTIVE ORGANS,PERITONEUM       |
------------------------------------------------+------------------------------
160 M N NASAL CAVITIES, MID-EAR,ACC SINUSES |  18.CA OTHER REPIRATORY
------------------------------------------------+------------------------------
161 MALIGNANT NEOPLASM OF LARYNX                |  16.CA LARYNX
------------------------------------------------+------------------------------
162 MALIGNANT NEOPLASM TRACHEA,BRONCHUS,LUNG|  17.CA TRACHEA, LUNG
------------------------------------------------+------------------------------
163 MALIGNANT NEOPLASM OF PLEURA                |  18.CA OTHER RESPIRATORY
164 M N THYMUS, HEART, MEDIASTINUM              |
165 M N OTHER RESPIRATORY & INTRATHORACIC       |
------------------------------------------------+------------------------------
170 M N BONE AND ARTICULAR CARTILAGE            |  21.CA BONE, TISSUE
171 M N CONNECTIVE AND OTHER SOFT TISSUE        |
------------------------------------------------+------------------------------
172 MALIGNANT MELANOMA OF SKIN                  |  19. CA SKIN
173 OTHER MALIGNANT NEOPLASM OF SKIN            |
------------------------------------------------+------------------------------
174 MALIGNANT NEOPLASM FEMALE BREAST            |  20.CA FEMALE BREAST
------------------------------------------------+------------------------------
175 MALILGNANT NEOPLASM MALE BREAST             |  21.CA BONE, TISSUE
------------------------------------------------+------------------------------
179 M N UTERUS, PART UNSPECIFIED                |  22.CA UTERUS
------------------------------------------------+------------------------------
180 MALIGNANT NEOPLASM CERVIX UTERI             |  23.CA CERVIX UTERI
------------------------------------------------+------------------------------
181 MALIGNANT NEOPLASM PLACENTA                 |  26.CA OTH GENITAL URINARY
------------------------------------------------+------------------------------
182 MALIGNANT NEOPLASM BODY OF UTERUS           |  22.CA UTERUS
------------------------------------------------+------------------------------
183 M N OVARY, OTHER UTERINE ADNEXA             |  26.CA OTHER GENITAL URIN
184 M N OTHER FEMALE GENITAL ORGANS             |
185 MALIGNANT NEOPLASM PROSTATE                 |
186 MALIGNANT NEOPLASM TESTIS                   |
187 M N PENIS & OTHER MALE GENITAL ORGANS       |
188 MALIGNANT NEOPLASM BLADDER                  |
189 N KIDNEY & OTHER URINARY ORGANS             |
------------------------------------------------+------------------------------
190 MALIGNANT NEOPLASM EYE                      |  28.CA UNSPECIFIED SITES
------------------------------------------------+------------------------------
191 MALIGNANT NEOPLASM BRAIN                    |  27.CA BRAIN
------------------------------------------------+------------------------------
192 M N OTHER PARTS OF NERVOUS SYSTEM           |  28.CA UNSPECIFIED SITES
193 MALIGNANT NEOPLASM THYROID GLAND            |
194 M N OTHER ENDCCRINE GLANDS & RELATED        |
195 M N OTHER & ILL-DEFINED SITES               |
196 SEC & UNSPEC M N LYMPH NODES                |
       ************************************************************
       *****                                                  *****
       ****               CAUSE OF DEATH CODES                 ****
       ***       ICD9 AND THE AGGREGATED GROUP OF 127           ***
       ****         PROGRAM - HLH1.JCL.CNTL(PRINT2)            ****
       *****          DATA - HLH1.DOC.DATA(ICD9)              *****
       ************************************************************

        ICD9 CODE                                   ONTARIO CODES
197 SEC M N RESP & DIGESTIVE SYSTEMS        |
198 SECONDARY M N OTHER SPECIFIED SITES     |
199 M N UNSPECIFIED SITE                    |
--------------------------------------------+-------------------------
200 LYMPHOSARCOMA & RETICULOSARCOMA         |  31.CA LYMPHATIC
--------------------------------------------+-------------------------
201 HODGKINS DISEASE                        |  29.HODGKINS DISEASE
--------------------------------------------+-------------------------
202 OTHER M N LYMPHOID & HISTIOCYTIC TISSUE |  31.CA LYMPHATIC
203 MULTIPLE MYELOMA & IMMUNOPROLIFERATIVE  |
----------------------------------------------------------------------
204 LYMPHOID LEUKAEMIA                      |  30.LEUKAEMIA
205 MYELOID LEUKAEMIA                       |
206 MONOCYTIC LEUKAEMIA                     |
207 OTHER SPECIFIED LEUKAEMIA               |
208 LEUKAEMIA UNSPECIFIED CELL              |
----------------------------------------------------------------------
210 BENIGN NEOPLASM LIP,ORAL CAVITY,PHARYNX |  35.OTHER UNSPECIFIED CA
211 BENIGN NEOPLASM OTHER DISGESTIVE SYSTEM |
212 B N RESPIRATORY & INTRATHORACIC ORGANS  |
213 B N BONE & ARTICULAR CARTILAGE          |
214 LIPOMA                                  |
215 OTHER B N CONNECTIVE & OTHER SOFT TISSUE|
216 BENIGN NEOPLASM SKIN                    |
217 BENIGN NEOPLASM BREAST                  |
218 UTERINE LEIOMYOMA                       |
219 OTHER BENIGN NEOPLASM UTERUS            |
220 BENIGN NEOPLASM OVARY                   |
221 BENIGN NEOPLASM OTHER FEMALE GENITAL    |
222 BENIGN NEOPLASM MALE GENITAL ORGANS     |
223 BENIGN NEOPLASM KIDNEY & OTHER URINARY  |
224 BENIGN NEOPLASM EYE                     |
225 BENIGN NEOPLASM BRAIN & OTHER NERVOUS   |
226 BENIGN NEOPLASM THYROID GLAND           |
227 BENIGN NEOPLASM OTHER ENDOCRINE & RELATE|
228 HAEMANGIOMA AND LYMPHANGIOMA, ANY SITE  |
229 BENIGN NEOPLASM OTHER AND UNSPECIFIED   |
230 CA IN SITU DIGESTIVE ORGANS             |
231 CA IN SITU RESPIRATORY SYSTEM           |
232 CA IN SITU SKIN                         |
233 CA IN SITU BREAST & GENITOURINARY       |
234 CA IN SITU OTHER AND UNSPECIFIED SITES  |
235 NEO UNCERTAIN BEHAVIOUR DIG & RESP SYS  |
236 NEO UNCERTAIN BEHAVIOUR GENITOURINARY   |
237 NEO UNCERT BEHAV ENDOCRINE & NERVOUS    |
238 NEO UNCERT BEHAV OTHER & UNSPEC SITES   |
239 NEOPLASM UNSPECIFIED NATURE             |
----------------------------------------------------------------------
240 SIMPLE AND UNSPECIFIED GOITRE           |  38.OTHER METABOLIC DIS
241 NONTOXIC NODULAR GOITRE                 |
242 THYROTOXICOSIS WITH OR WITHOUT GOITRE   |
            ************************************************************
            *****                                                  *****
            ****          CAUSE OF DEATH CODES                      ****
            ***      ICD9 AND THE AGGREGATED GROUP OF 127            ***
            ****       PROGRAM - HLH1.JCL.CNTL(PRINT2)              ****
            *****        DATA - HLH1.DOC.DATA(ICD9)                *****
            ************************************************************

        ICD9 CODE                                         ONTARIO CODES
243 CONGENITAL HYPOTHYROIDISM                     |
244 ACQUIRED HYPOTHYROIDISM                       |
245 THYROIDITIS                                   |
246 OTHER DISORDERS OF THYROID                    |
-----------------------------------------------------------------------
250 DIABETES MELLITUS                             | 36.DIABETES MELLITUS
-----------------------------------------------------------------------
251 OTHER DISORDERS PANCREAT INTERN SECRET        | 38.OTHER METABOLIC DIS
252 DISORDERS PARATHYROID GLAND                   |
253 DISORDERS PITUITARY & HYPOTHALAMIC CONTR      |
254 DISEASES OF THYMUS GLAND                      |
255 DISORDERS OF ADRENAL GLANDS                   |
256 OVARIAN DYSFUNCTION                           |
257 TESTICULAR DYSFUNCTION                        |
258 POLYGLANDULAR DYSFUNCTION & RELATED           |
259 OTHER ENDOCRINE DISORDERS                     |
-----------------------------------------------------------------------
260 KWASHIORKOR                                   | 37.NUTRITIONAL DEFICIEN
261 NUTRITIONAL MARASMUS                          |
262 OTHER SEVERE PROTEIN-CALORIE MALNUTRIT        |
263 OTHER & UNSPECIFIED PROT-CAL MALNUTRIT        |
264 VITAMIN A DEFICIENCY                          |
265 THIAMINE & NIACIN DEFICIENCY STATES           |
266 DEFICIENCY OF B-COMPLEX COMPONENTS            |
267 ASCORBIC ACID DEFICIENCY                      |
268 VITAMIN D DEFICIENCY                          |
269 OTHER NUTRITIONAL DEFICIENCIES                |
-----------------------------------------------------------------------
270 DISORDERS AMINO-ACID TRANSPORT & METAB        | 38.OTHER METABOLIC DIS
271 DISORD CARBOHYDRATE TRANSPORT & METAB         |
272 DISORDERS LIPOID METABOLISM                   |
273 DISORDERS PLASMA PROTEIN METABOLISM           |
274 GOUT                                          |
275 DISORDERS MINERAL METABOLISM                  |
276 DISORD FLUID, ELECTROLYT & ACID-BASE BAL      |
277 OTHER & UNSPECIFIED METABOLISM                |
278 OBESITY & OTHER HYPERALIMENTATION             |
279 DISORDERS INVOLVING IMMUNE MECHANISM          |
-----------------------------------------------------------------------
280 IRON DEFICIENCY ANAEMIAS                      | 39.ANAEMIAS
281 OTHER DEFICIENCY ANAEMIAS                     |
282 HEREDITARY HAEMOLYTIC ANAEMIAS                |
283 ACQUIRED HAEMOLYTIC ANAEMIAS                  |
284 APLASTIC ANAEMIA                              |
285 OTHER & UNSPECIFIED ANAEMIAS                  |
-----------------------------------------------------------------------
286 COAGULATION DEFECTS                           | 40.ALL OTHER BLOOD CON
287 PURPURA & OTHER HAEMORRHAGIC CONDITIONS       |
288 DISEASES OF WHITE BLOOD CELLS                 |
289 OTHER DIS BLOOD & BLOOD-FORMING ORGANS        |
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****             CAUSE OF DEATH CODES                   ****
***        ICD9 AND THE AGGREGATED GROUP OF 127          ***
****          PROGRAM - HLH1.JCL.CNTL(PRINT2)           ****
*****           DATA - HLH1.DOC.DATA(ICD9)             *****
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       ICD9 CODE                                          ONTARIO CODES
290 SENILE & PRESENILE ORGANIC PSYCHOTIC       | 41.PSYCHOSES
291 ALCOHOLIC PSYCHOSES                        |
292 DRUG PSYCHOSES                             |
293 TRANSIENT ORGANIC PSYCHOTIC CONDITIONS     |
294 OTHER ORG PSYCHOTIC CONDITIONS (CHRONIC)   |
295 SCHIZOPHRENIC PSYCHOSES                    |
296 AFFECTIVE PSYCHOSES                        |
297 PARANOID STATES                            |
298 OTHER NONORGANIC PSYCHOSES                 |
299 PSYCHOSES SPECIFIC CHILDHOOD ORIGIN        |
------------------------------------------------------------------------
300 NEUROTIC DISORDERS                         | 44.ALL MENTAL DISORDERS
301 PERSONALITY DISORDERS                      |
302 SEXUAL DEVIATIONS & DISORDERS              |
------------------------------------------------------------------------
303 ALCOHOL DEPENDENCE SYNDROME                | 42.ALCOHOL & DRUG
304 DRUG DEPENDENCE                            |
------------------------------------------------------------------------
305 NONDEPENDENT ABUSE OF DRUGS                | 44.ALL MENTAL DISORDERS
306 PHYSIOLOGICAL MALFUNCTION -MENTAL FACTOR   |
307 SPECIAL SYMPTOMS NOT ELSEWHER CLASSIFIED   |
308 ACUTE REACTION TO STRESS                   |
309 ADJUSTMENT REACTION                        |
310 NONPSYCHOTIC MENTAL DISORDER-BRAIN DAMAG   |
311 DEPRESS DISORDER UNCLASSIFIED ELSEWHERE    |
312 DISTURBANCE CONDUCT UNCLASSIFIED           |
313 DISTURB EMOTIONS CHILDHOOD & ADOLESCENT    |
314 HYPERKINETIC SYNDROME OF CHILDHOOD         |
315 SPECIFIC DELAYS IN DEVELOPMENT             |
316 PSYCHIC FACTORS CLASSIFIED ELSEWHERE       |
------------------------------------------------------------------------
317 MILD MENTAL RETARDATION                    | 43.MENTAL RETARDATION
318 OTHER SPECIFIED MENTAL RETARDATION         |
319 UNSPECIFIED MENTAL RETARDATION             |
------------------------------------------------------------------------
320 BACTERIAL MENINGITIS                       | 45.MENINGITIS
321 MENINGITIS DUE TO OTHER ORGANISMS          |
322 MENINGITIS UNSPECIFIED CAUSE               |
------------------------------------------------------------------------
323 ENCEPHALITIS, MYELITIS & ENCEPHALOMYEL     | 46.ALL OTHER CNS
324 INTRACRANIAL AND INTRASPINAL ABSCESS       |
325 PHLEBITIS & THROMBOPHLEBITIS CRANIAL       |
326 LATE EFFECTS INTRACRANIAL ABSCESS          |
330 CEREBRAL DEGENERATIONS IN CHILDHOOD        |
331 OTHER CEREBRAL DEGENERATIONS               |
332 PARKINSONS DISEASE                         |
333 OTHER EXTRAPYRAMIDAL DISEASE               |
334 SPINOCEREBELLAR DISEASE                    |
335 ANTERIOR HORN CELL DISEASE                 |
336 OTHER DISEASES SPINAL CORD                 |
337 DISORDERS AUTONOMIC NERVOUS SYSTEM         |
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****               CAUSE OF DEATH CODES                   ****
***        ICD9 AND THE AGGREGATED GROUP OF 127            ***
****         PROGRAM - HLHI.JCL.CNTL(PRINT2)              ****
*****           DATA - HLHI.DOC.DATA(ICD9)               *****
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        ICD9 CODE                                    ONTARIO CODES
-------------------------------------------------------------------
340 MULTIPLE SCLEROSIS                        | 46.MULTIPLE SCLEROSIS
-------------------------------------------------------------------
341 OTHER DEMYELINATING DISEASES C N S        | 48.ALL OTHER CNS
342 HEMIPLEGIA                                |
343 INFANTILE CEREBRAL PALSY                  |
344 OTHER PARALYTIC SYNDROMES                 |
-------------------------------------------------------------------
345 EPILEPSY                                  | 47.EPILEPSY
-------------------------------------------------------------------
346 MIGRAINE                                  | 48.ALL OTHER CNS
347 CATALEPSY AND NARCOLEPSY                  |
348 OTHER CONDITIONS OF BRAIN                 |
349 OTHER UNSPECIFIED OF NERVOUS SYSTEM       |
350 TRIGEMINAL NERVE DISORDERS                |
351 FACIAL NERVE DISORDERS                    |
352 DISORDERS OF OTHER CRANIAL NERVES         |
353 NERVE ROOT & PLEXUS DISORDERS             |
354 MONONEURITIS UPPER LIMB & MULTIPLEX       |
355 MONONEURITIS OF LOWER LIMB                |
356 HEREDITARY & IDIOPATH PERIPH NEUROPATHY   |
357 INFLAMMATORY & TOXIC NEUROPATHY           |
358 MYONEURAL DISORDERS                       |
359 MUSCULAR DYSTROPHIES & OTHER MYOPATHIES   |
-------------------------------------------------------------------
360 DISORDERS OF THE GLOBE                    | 49.EYE AND ADNEXA
361 RETINAL DETACHMENTS & DEFECTS             |
362 OTHER RETINAL DISORDERS                   |
363 CHORIORETINAL INFLAMMATIONS & SCARS ETC   |
364 DISORDERS OF IRIS AND CILIARY BODY        |
365 GLAUCOMA                                  |
366 CATARACT                                  |
367 DISORDERS-REFRACTION & ACCOMMODATION      |
368 VISUAL DISTURBANCES                       |
369 BLINDNESS & LOW VISION                    |
370 KERATITIS                                 |
371 CORNEAL OPACITY AND OTHER CORNEA          |
372 DISORDERS OF CONJUNCTIVA                  |
373 INFLAMMATION OF EYELIDS                   |
374 OTHER DISORDERS OF EYELIDS                |
375 DISORDERS OF LACRIMAL SYSTEM              |
376 DISORDERS OF THE ORBIT                    |
377 DISORDERS OPTIC NERVE & VISUAL PATHWAYS   |
378 STRABISMUS & OTHER OF BINOCULAR EYE MOVE  |
379 OTHER DISORDERS OF EYE                    |
-------------------------------------------------------------------
380 DISORDERS OF EXTERNAL EAR                 | 50.EAR & MASTOID
381 NONSUPPURATIVE OTITIS MEDIA ETC           |
382 SUPPURATIVE & UNSPEC OTITIS MEDIA         |
383 MASTOIDITIS & RELATED CONDITIONS          |
384 OTHER TYMPANIC MEMBRANE                   |
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****              CAUSE OF DEATH CODES                   ****
***        ICD9 AND THE AGGREGATED GROUP OF 127           ***
****         PROGRAM - HLH1.JCL.CNTL(PRINT2)             ****
*****          DATA - HLH1.DOC.DATA(ICD9)               *****
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            ICD9 CODE                                    ONTARIO CODES
385 OTHER MIDDLE EAR & MASTOID                 |
386 VERTIGINOUS SYNDROMES & OTHER              |
387 OTOSCLEROSIS                               |
388 OTHER DISORDERS OF EAR                     |
389 DEAFNESS                                   |
------------------------------------------------------------------------
390 RHEUMATIC FEVER-NO HEART INVOLVEMENT       |  51.ACUTE RHEUMATIC FEVER
391 RHEUMATIC FEVER WITH HEART INVOLVEMENT     |
392 RHEUMATIC CHOREA                           |
------------------------------------------------------------------------
393 CHRONIC RHEUMATIC PERICARDITIS             |  52.RHEUMATIC HEART DIS
394 DISEASES OF MITRAL VALVE                   |
395 DISEASES OF AORTIC VALVE                   |
396 DISEASES MITRAL & AORTIC VALVES            |
397 DISEASES OF OTHER ENDOCARDIAL STRUCTURES   |
398 OTHER RHEUMATIC HEART DISEASE              |
------------------------------------------------------------------------
401 ESSENTIAL HYPERTENSION                     |  54.OTHER HYPERTENSION
------------------------------------------------------------------------
402 HYPERTENSIVE HEART DISEASE                 |  53.HYPERTENSIVE HEART DIS
------------------------------------------------------------------------
403 HYPERTENSIVE RENAL DISEASE                 |  54.OTHER HYPERTENSIVE DIS
404 HYPERTENSIVE HEART & RENAL DISEASE         |
405 SECONDARY HYPERTENSION                     |
------------------------------------------------------------------------
410 ACUTE MYOCARDIAL INFARCTION                |  55.MYOCARDIAL INFARCT
------------------------------------------------------------------------
411 OTHER ACUTE & SUBACUTE ISCHAEMIC HT DIS    |  56.ISCHAEMIC HEART DIS
412 OLD MYOCARDIAL INFARCTION                  |
413 ANGINA PECTORIS                            |
414 OTHER CHRONIC ISCHAEMIC HEART DISEASE      |
------------------------------------------------------------------------
415 ACUTE PULMONARY HEART DISEASE              |  57.PULMONARY EMBOLISM *
415 ACUTE PULMONARY HEART DISEASE              |  58.OTHER PULMONARY EMB *
416 CHRONIC PULMONARY HEART DISEASE            |
417 OTHER DISEASES OF PULMONARY CIRCULATION    |
------------------------------------------------------------------------
420 ACUTE PERICARDITIS                         |  60.OTH PULMONARY HRT DIS
421 ACUTE & SUBACUTE ENDOCARDITIS              |
422 ACUTE MYOCARDITIS                          |
423 OTHER DISEASES OF PERICARDIUM              |
424 OTHER DISEASES OF ENDOCARDIUM              |
425 CARDIOMYOPATHY                             |
426 CONDUCTION DISORDERS                       |
------------------------------------------------------------------------
427 CARDIAC DYSRHYTHMIAS                       |  59.DYSRHYTHMIAS
------------------------------------------------------------------------
428 HEART FAILURE                              |  60.OTH PULMONARY HRT DIS
429 ILL-DEFINED HEART DISEASE                  |
------------------------------------------------------------------------
430 SUBARACHNOID HAEMORRHAGE                   |  61.SUBARACHNOID HAEM
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****              CAUSE OF DEATH CODES                     ****
***        ICD8 AND THE AGGREGATED GROUP OF 127             ***
****          PROGRAM - HLH1.JCL.CNTL(PRINT2)              ****
*****           DATA - HLH1.DOC.DATA(ICD8)                *****
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        ICD8 CODE                                    ONTARIO CODES
------------------------------------------------------------------------
431 INTRACEREBRAL HAEMORRHAGE                  | 62.INTRACEREBRAL HAEM
432 OTHER & UNSPEC INTRACRANIAL HAEMORRHAGE    |
------------------------------------------------------------------------
433 OCCLUSION & STENOSIS PRECEREBRAL ARTERY    | 63.CEREBRAL INFARCT
434 OCCLUSION OF CEREBRAL ARTERIES             |
------------------------------------------------------------------------
435 TRANSCIENT CEREBRAL ISCHAEMIA              | 66.OTH CEREBROVASCULAR DI
------------------------------------------------------------------------
436 ACUTE ILL-DEFINED CEREBVASC DISEASE        | 64.ACUTE CEREBROV DIS
------------------------------------------------------------------------
437 OTHER & ILL-DEFINED CEREBVASC DISEASE      | 65.CEREBRAL ATHEROSCLER
------------------------------------------------------------------------
438 LATE EFFECTS OF CEREBROVASCULAR DISEASE    | 66.OTH CEREBROVASCULAR DI
------------------------------------------------------------------------
440 ATHEROSCLEROSIS                            | 67.ATHEROSCLEROSIS
------------------------------------------------------------------------
441 AORTIC ANEURYSM                            | 69.ARTERIAL EMBOLISM &
442 OTHER ANEURYSM                             |    THROMBOSIS
443 OTHER PERIPHERAL VASCULAR DISEASE          |
------------------------------------------------------------------------
444 ARTERIAL EMBOLISM & THROMBOSIS             | 68.ARTERIES & CAPILLARIES
------------------------------------------------------------------------
446 POLYARTERITIS NODOSA & ALLIED CONDITION    | 68.ARTERIAL EMBOLISM
447 OTHER DISORDERS ARTERIES & ARTERIOLES      |    & THROMBOSIS
448 DISEASES OF CAPILLARIES                    |
------------------------------------------------------------------------
451 PHLEBITIS & THROMBOPHLEBITIS               | 70.VEINS & LYMPHATICS
452 PORTAL VEIN THROMBOSIS                     |
453 OTHER VENOUS EMBOLISM & THROMBOSIS         |
454 VARICOSE VEINS LOWER EXTREMITIES           |
455 HAEMORRHOIDS                               |
456 VARICOSE VEINS OF OTHER SITES              |
457 NONINFECTIVE DISORDER LYMPHATIC CHANNEL    |
458 HYPOTENSION                                |
459 OTHER DISORDERS CIRCULATORY SYSTEM         |
------------------------------------------------------------------------
460 ACUTE NASOPHARYNGITIS(COMMON COLD)         | 71.UPPER RESP TRACT
461 ACUTE SINUSITIS                            |
462 ACUTE PHARYNGITIS                          |
463 ACUTE TONSILLITIS                          |
464 ACUTE LARYNGITIS & TRACHEITIS              |
465 ACUTE U R I MULTIPLE/UNSPEC SITES          |
------------------------------------------------------------------------
466 ACUTE BRONCHITIS & BRONCHIOLITIS           | 72.ACUTE BRONCHITIS
------------------------------------------------------------------------
470 DEFLECTED NASAL SEPTUM                     |
471 NASAL POLYPS                               |
472 CHRONIC PHARYNGITIS & NASOPHARYNGITIS      |
473 CHRONIC SINUSITIS                          |
474 CHRONIC DISEASE TONSILS & ADENOIDS         |
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          ****              CAUSE OF DEATH CODES                  ****
          ***         ICD9 AND THE AGGREGATED GROUP OF 127         ***
          ****          PROGRAM - HLH1.JCL.CNTL(PRINT2)           ****
          *****            DATA - HLH1.DOC.DATA(ICD9)            *****
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       ICD9 CODE                                         ONTARIO CODES
475 PERITONSILLAR ABSCESS                     |
476 CHRONIC LARYNGITIS & LARYNGOTRACHEITIS    |
477 ALLERGIC RHINITIS                         |
478 OTHER DISEASES UPPER RESPIRATORY TRACT    |
-------------------------------------------------------------------------
480 VIRAL PNEUMONIA                           |  73.PNEUMONIA
481 PNEUMOCOCCAL PNEUMONIA                    |
482 OTHER BACTERIAL PNEUMONIA                 |
483 PNEUMONIA DUE TO OTHER SPEC ORGANISM      |
484 PNEUMONIA IN INF DIS CLASS ELSEWHERE      |
485 BRONCHOPNEUMONIA, UNSPECIFIED             |
486 PNEUMONIA UNSPECIFIED                     |
-------------------------------------------------------------------------
487 INFLUENZA                                 |  74.INFLUENZA
-------------------------------------------------------------------------
490 BRONCHITIS UNSPECIFIED                    |  75.EMPHASEMA, ASTHMA
491 CHRONIC BRONCHITIS                        |
492 EMPHYSEMA                                 |
493 ASTHMA                                    |
-------------------------------------------------------------------------
494 BRONCHIECTASIS                            |  76.BRONCHIECTASIS
-------------------------------------------------------------------------
495 EXTRINSIC ALLERGIC ALVEOLITIS             |  77.OTHER RESPIRATORY
496 CHRONIC AIRWAYS OBSTRUCTION NEC           |
500 COALWORKERS PNEUMOCONIOSIS                |
501 ASBESTOSIS                                |
502 PNEUMOCONIOSIS DUE TO OTHER SILICATES     |
503 PNEUMOCONIOSIS DUE TO OTHER INORG DUST    |
504 PNEUMOPATHY - INHALATION OF OTHER DUST    |
505 PNEUMOCONIOSIS, UNSPECIFIED               |
506 RESP COND - CHEMICAL FUMES & VAPOURS      |
507 PNEUMONITIS - SOLIDS & LIQUIDS            |
508 RESP COND - OTHER & UNSPECIFIED EXTERNAL  |
510 EMPYEMA                                   |
511 PLEURISY                                  |
512 PNEUMOTHORAX                              |
513 ABSCESS OF LUNG & MEDIASTINUM             |
514 PULMONARY CONGESTION & HYPOSTASIS         |
515 POSTINFLAMMATORY PULMONARY FIBROSIS       |
516 OTHER ALVEOLAR & PARIETOALV PNEUMOPATHY   |
517 LUNG INV - CONDITIONS CLASS ELSEWHERE     |
518 OTHER DISEASES OF LUNG                    |
519 OTHER DISEASES RESPIRATORY SYSTEM         |
-------------------------------------------------------------------------
520 DISORDERS TOOTH DEVELOP & ERUPTION        |  84.OTHER DIGESTIVE
521 DISEASES HARD TISSUES OF TEETH            |
522 DIS - PULP & PERIAPICAL TISSUES           |
523 GINGIVAL & PERIODONTAL DISEASES           |
524 DENTOFACIAL ANOMALIES INC MALOCCLUSION    |
525 OTHER TEETH & SUPPORT STRUCTURES          |
526 DISEASES OF THE JAWS                      |
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****            CAUSE OF DEATH CODES                        ****
***       ICD8 AND THE AGGREGATED GROUP OF 127               ***
****        PROGRAM - HLH1.JCL.CNTL(PRINT2)                 ****
*****         DATA - HLH1.DOC.DATA(ICD8)                   *****
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       ICD8 CODE                                   ONTARIO CODES
527 DISEASES OF SALIVARY GLANDS            |
528 DIS ORAL SOFT TISSUE EXC GINGIVA &TONGU|
529 DIS & OTHER CONDITIONS OF TONGUE       |
530 DISEASES OF OESOPHAGUS                 |
--------------------------------------------------------------------
531 GASTRIC ULCER                          |  78.ULCERS
532 DUODENAL ULCER                         |
533 PEPTIC ULCER SITE UNSPECIFIED          |
--------------------------------------------------------------------
534 GASTROJEJUNAL ULCER                    |  84.OTHER DIGESTIVE
535 GASTRITIS & DUODENITIS                 |
536 DISORDERS OF FUNCTION OF STOMACH       |
537 OTHER DISORDERS STOMACH & DUODENUM     |
--------------------------------------------------------------------
540 ACUTE APPENDICITIS                     |  79.APPENDICITIS
541 APPENDICITIS UNQUALIFIED               |
542 OTHER APPENDICITIS                     |
543 OTHER DISEASE OF APPENDIX              |
--------------------------------------------------------------------
550 INGUINAL HERNIA                        |  80.ABDOMINAL HERNIA
551 OTHER HERNIA ABDOMEN WITH GANGRENE     |
552 OTHER HERNIA ABDOMEN OBSTRUCTION NO GANG|
553 OTHER HERNIA ABDOMEN NO OBSTRUCT OR GANG|
--------------------------------------------------------------------
555 REGIONAL ENTERITIS                     |  84.OTHER DIGESTIVE
556 IDIOPATHIC PROCTOCOLITIS               |
557 VASCULAR INSUFFICIENCY OF INTESTINE    |
558 OTHER NONINF GASTROENTERITIS & COLITIS |
--------------------------------------------------------------------
560 INTESTINAL OBSTRUCTION-NO HERNIA       |  81.INTESTINAL OBSTRUCT
--------------------------------------------------------------------
562 DIVERTICULA OF INTESTINE               |  84.OTHER DIGESTIVE
564 FUNCTIONAL DIGESTIVE DISORDERS NEC     |
565 ANAL FISSURE & FISTULA                 |
566 ABSCESS OF ANAL & RECTAL REGIONS       |
567 PERITONITIS                            |
568 OTHER DISORDERS PERITONEUM             |
569 OTHER DISORDERS INTESTINE              |
570 ACUTE & SUBACUTE NECROSIS OF LIVER     |
--------------------------------------------------------------------
571 CHRONIC LIVER DISEASE & CIRRHOSIS      |  82.CIRRHOSIS
--------------------------------------------------------------------
572 LIVER ABSCESS & SEQUELAE CHR LIVER DIS |  84.OTHER DIGESTIVE
573 OTHER DISORDERS OF LIVER               |
--------------------------------------------------------------------
574 CHOLELITHIASIS                         |  83.CHOLELITHIASIS
575 OTHER DISORDERS OF GALLBLADDER         |
--------------------------------------------------------------------
576 OTHER DISORDERS OF BILIARY TRACT       |  84.OTHER DIGESTIVE
577 DISEASES OF PANCREAS                   |
578 GASTROINTESTINAL HAEMORRHAGE           |
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****           CAUSE OF DEATH CODES                      ****
***       ICD9 AND THE AGGREGATED GROUP OF 127            ***
****        PROGRAM - HLH1.JCL.CNTL(PRINT2)              ****
*****         DATA - HLH1.DOC.DATA(ICD9)                *****
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       ICD9 CODE                             |      ONTARIO CODES
579 INTESTINAL MALABSORPTION                 |
---------------------------------------------------------------------
580 ACUTE GLOMERULONEPHRITIS                 |  85.NEPHRITIS
581 NEPHROTIC SYNDROME                       |
582 CHRONIC GLOMERULONEPHRITIS               |
583 NEPHRITIS & NEPHROPATHY NOS              |
584 ACUTE RENAL FAILURE                      |
585 CHRONIC RENAL FAILURE                    |
586 RENAL FAILURE UNSPECIFIED                |
587 RENAL SCLEROSIS UNSPECIFIED              |
588 DISORDERS FROM IMPAIRED RENAL FUNCTION   |
589 SMALL KIDNEY UNKNOWN CAUSE               |
---------------------------------------------------------------------
590 INFECTIONS OF KIDNEY                     |  87.OTHER URINARY
591 HYDRONEPHROSIS                           |
592 CALCULUS KIDNEY & URETER                 |
593 OTHER DISORDERS KIDNEY & URETER          |
594 CALCULUS LOWER URINARY TRACT             |
595 CYSTITIS                                 |
596 OTHER DISORDERS BLADDER                  |
597 URETHRITIS NOT SEX TRANSMITTED           |
598 URETHRAL STRICTURE                       |
599 OTHER DIS URETHRA & URINARY TRACT        |
---------------------------------------------------------------------
600 HYPERPLASIA OF PROSTATE                  |  88.MALE GENITAL ORGAN
601 INFLAMMATORY DISEASES PROSTATE           |
602 OTHER DISORDERS PROSTATE                 |
603 HYDROCELE                                |
604 ORCHITIS & EPIDIDYMITIS                  |
605 REDUNDANT PREPUCE & PHIMOSIS             |
606 INFERTILITY, MALE                        |
607 DISORDERS OF PENIS                       |
608 OTHER DISORDERS MALE GENITAL ORGANS      |
---------------------------------------------------------------------
610 BENIGN MAMMARY DYSPLASIAS                |  89.FEMALE GENITAL ORGAN
611 OTHER DISORDERS OF BREAST                |
614 INFLAM DIS OVARY, FALLOPIAN TUBE, ETC    |
615 INFLAM DIS UTERUS, EXCEPT CERVIX         |
616 INFLAM DIS CERVIX, VAGINA & VULVA        |
617 ENDOMETRIOSIS                            |
618 GENITAL PROLAPSE                         |
619 FISTULAE-FEMALE GENITAL TRACT            |
620 NONINFLAM DIS OVARY, FALLOPIAN TUBE, ETC |
621 DISORDERS OF UTERUS NEC                  |
622 NONINFLAMMATORY DISORDERS OF CERVIX      |
623 NONINFLAMMATORY DISORDERS OF VAGINA      |
624 NONINF DIS OF VULVA & PERINEUM           |
625 PAIN & OTHER WITH FEMALE GENITAL ORGANS  |
626 DIS OF MENSTRUATION & ABNORMAL BLEEDING  |
627 MENOPAUSAL & POSTMENOPAUSAL DISORDERS    |
628 INFERTILITY, FEMALE                      |
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****             CAUSE OF DEATH CODES                      ****
***        ICD9 AND THE AGGREGATED GROUP OF 127             ***
****         PROGRAM - HLH1.JCL.CNTL(PRINT3)               ****
*****          DATA - HLH1.DOC.DATA(ICD9)                 *****
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          ICD9 CODE                              ONTARIO CODES
629 OTHER DISORDERS FEMALE GENITAL ORGANS    |
------------------------------------------------------------------
630 HYDATIDFORM MOLE                         | 93.ALL OTHER ABORTION
631 OTHER ABNORMAL PRODUCT OF CONCEPTION     |
632 MISSED ABORTION                          |
633 ECTOPIC PREGNANCY                        |
------------------------------------------------------------------
634 SPONTANEOUS ABORTION                     | 90.SPONT. ABORTION
------------------------------------------------------------------
635 LEGALLY INDUCED ABORTION                 | 91.INDUCED ABORTION
------------------------------------------------------------------
636 ILLEGALLY INDUCED ABORTION               | 92.ILLEGAL INDUCED
------------------------------------------------------------------
637 UNSPECIFIED ABORTION                     | 93.ALL OTHER ABORTION
638 FAILED ATTEMPTED ABORTION                |
639 COMPLICATIONS - ABORTION, ETC            |
------------------------------------------------------------------
640 HAEMORRHAGE IN EARLY PREGNANCY           | 94.DIRECT OBSTETRIC
641 ANTEPARTUM HAEM, ABRUPTIO PLACENTAE, ETC |
642 HYPERTENSION COMPLICATING PREGNANCY, ETC |
643 EXCESSIVE VOMITING IN PREGNANCY          |
644 EARLY OR THREATENED LABOUR               |
645 PROLONGED PREGNANCY                      |
646 OTHER COMPLICATIONS PREGNANCY NEC        |
------------------------------------------------------------------
647 INFECTIVE & PARASITIC IN MOTHER, ETC     | 95.INDIRECT OBSTETRIC
648 OTHER CURRENT CONDITIONS MOTHER, ETC     |
------------------------------------------------------------------
650 DELIVERY COMPLETELY NORMAL CASE          | 96.NORMAL DELIVERY
------------------------------------------------------------------
651 MULTIPLE GESTATION                       | 97.ABNORMAL DELIVERY
652 MALPOSITION & MALPRESENTATION FETUS      |
653 DISPROPORTION                            |
654 ABNORMALITY ORGANS & SOFT TISSUES PELVIS |
655 FETAL ABNORM AFFECT MGMT OF MOTHER       |
656 OTHER FETAL & PLACENTAL AFFECTING MOTHER |
657 POLYHYDRAMNIOS                           |
658 OTHER PROBLEM AMNIOTIC CAVITY & MEMBRANE |
659 OTHER NEED FOR CARE - LABOUR NEC         |
660 OBSTRUCTED LABOUR                        |
662 ABNORMALITY OF FORCES OF LABOUR          |
663 UMBILICAL CORD COMPLICATIONS             |
664 TRAUMA - PERINEUM & VULVA - DELIVERY     |
665 OTHER OBSTETRICAL DRAMA                  |
666 POSTPARTUM HAEMORRHAGE                   |
667 RETAIN PLACENTA OR MEMBRANES, NO HAEM    |
668 COMPLICATIONS-ANAESTHETIC, SEDATION      |
669 OTHER COMP OF LABOUR & DELIVERY NEC      |
670 MAJOR PUERPERAL INFECTION                |
671 VENOUS COMP IN PREGNANCY & PUERPERIUM    |
673 P U O DURING PUERPERIUM                  |
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****              CAUSE OF DEATH CODES                   ****
***         ICD9 AND THE AGGREGATED GROUP OF 127          ***
****           PROGRAM - HLH1.JCL.CNTL(PRINT2)           ****
*****            DATA - HLH1.DOC.DATA(ICD9)             *****
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      ICD9 CODE                                        ONTARIO CODES
673 OBSTETRICAL PULMONARY EMBOLISM              |
674 OTHER UNSP COMP PUERPERIUM NEC              |
675 INFECTION BREAST & NIPPLE-CHILDBIRTH        |
676 OTHER BREAST & LACTATION-CHILDBIRTH         |
------------------------------------------------------------------------
680 CARBUNCLE & FURUNCLE                        |  98.SKIN DISEASES
681 CELLULITIS & ABSCESS OF FINGER & TOE        |
682 OTHER CELLULITIS & ABSCESS                  |
683 ACUTE LYMPHADENITIS                         |
684 IMPETIGO                                    |
685 PILONIDAL CYST                              |
686 OTHER LOCAL INFECTIONS SKIN ETC             |
690 ERYTHEMATOSQUAMOUS DERMATOSIS               |
691 ATOPIC DERMATITIS & RELATED CONDITIONS      |
692 CONTACT DERMATITIS & OTHER ECZEMA           |
693 DERMATITIS - SUBSTANCES TAKEN INTERNALLY    |
694 BULLOUS DERMATOSES                          |
695 ERYTHEMATOUS CONDITIONS                     |
696 PSORIASIS AND SIMILAR DISORDERS             |
697 LICHEN                                      |
698 PRURITUS AND RELATED CONDITIONS             |
700 CORNS AND CALLOSITIES                       |
701 OTHER HYPERTROPHIC & ATROPHIC COND SKIN     |
702 OTHER DERMATOSES                            |
703 DISEASES OF NAIL                            |
704 DISEASES OF HAIR & HAIR FOLLICLES           |
705 DISORDERS OF SWEAT GLANDS                   |
706 DISEASES OF SEBACEOUS GLANDS                |
707 CHRONIC ULCER SKIN                          |
708 URTICARIA                                   |
709 OTHER DIS SKIN & SUBCUTANEOUS TISSUE        |
------------------------------------------------------------------------
710 DIFFUSE DISEASES CONNECTIVE TISSUE          |  99.MUSCULOSKELETAL
711 ARTHROPATHY ASSOCIATED WITH INFECTIONS      |
712 CRYSTAL ARTHROPATHIES                       |
713 ARTHROPATHY ASSOCIATED OTHER DISORDERS      |
714 RHEUMATOID ARTHRITIS & POLYARTHROPATHIES    |
715 OSTEOARTHRITIS & ALLIED DISORDERS           |
716 OTHER & UNSPECIFIED ARTHROPATHIES           |
717 INTERNAL DERANGEMENT OF KNEE                |
718 OTHER DERANGEMENT OF JOINT                  |
719 OTHER & UNSPECIFIED DISORDER OF JOINT       |
720 ANKYLOSING SPONDYLITIS, ETC                 |
721 SPONDYLOSIS & ALLIED DISORDERS              |
722 INTERVERTEBRAL DISC DISORDERS               |
723 OTHER DISORDERS OF CERVICAL REGION          |
724 OTHER & UNSPEC DISORDERS OF BACK            |
725 POLYMYALGIA RHEUMATICA                      |
726 PERIPHERAL ENTHESOPATHIES & ALLIED SYND     |
727 OTHER DIS SYNOVIUM, TENDON AND BURSA        |
728 DIS MUSCLE, LIGAMENT AND FASCIA             |
**************************************************************
*****                                                    *****
****            CAUSE OF DEATH CODES                      ****
***        ICD9 AND THE AGGREGATED GROUP OF 127            ***
****         PROGRAM - HLH1.JCL.CNTL(PRINT2)              ****
*****          DATA - HLH1.DOC.DATA(ICD9)                *****
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       ICD9 CODE
 729 OTHER DISORDERS OF SOFT TISSUES      |       ONTARIO CODES
 730 OSTEOMYELITIS, PERIOSTITIS & OTHER BONE |
 731 OSTEITISDEFORMANS & OSTEOPATHIES, ETC |
 732 OSTEOCHONDROPATHIES                  |
 733 OTHER DISORDERS BONE & CARTILAGE     |
 734 FLAT FOOT                            |
 735 ACQUIRED DEFORMITIES OF TOE          |
 736 OTHER ACQUIRED DEFORMITIES OF LIMBS  |
 737 CURVATURE OF SPINE                   |
 738 OTHER ACQUIRED DEFORMITY             |
 739 NONALLOPATHIC LESIONS, NEC           |
--------------------------------------------------------------
 740 ANENCEPHALUS & SIMILAR ANOMALIES     | 100.ANENCEPHALUS
--------------------------------------------------------------
 741 SPINA BIFIDA                         | 101.SPINA BIFIDA
--------------------------------------------------------------
 742 OTHER CONGENITAL ANOMALIES NERVOUS SYS | 102.HYDROCEPHALUS (742.3)*
 742 OTHER CONGENITAL ANOMALIES NERVOUS SYS | 105.ALL CONG ANOMALIES *
--------------------------------------------------------------
 743 CONGENITAL ANOMALIES EYE             | 105.ALL CONG ANOMALIES
 744 CONGENITAL ANOMALIES EAR, FACE & NECK |
--------------------------------------------------------------
 745 BULBUS CORDIS ANOMALIES, ETC         | 103.CONG HEART AND
 746 OTHER CONGENITAL ANOMALIES HEART     |      CIRCULATION
 747 OTHER CONG ANOM CIRCULATORY SYSTEM   |
--------------------------------------------------------------
 748 CONGENITAL ANOMALIES RESPIRATORY SYSTEM | 105.ALL CONG ANOMALIES
--------------------------------------------------------------
 749 CLEFT PALATE & CLEFT LIP             | 104.CONGENITAL DIGESTIVE
 750 OTHER CONG ANOM UPPER ALIMENTARY TRACT |
 751 OTHER CONG ANOM DIGESTIVE SYSTEM     |
--------------------------------------------------------------
 752 CONGENITAL ANOMALIES GENITAL ORGANS  | 105.ALL CONG ANOMALIES
 753 CONGENITAL ANOMALIES URINARY SYSTEM  |
 754 CERTAIN CONG MUSCULOSKELETAL DEFORMITIES |
 755 OTHER CONGENITAL ANOMALIES OF LIMBS  |
 756 OTHER CONG MUSCULOSKELETAL ANOMALIES |
 757 CONGENITAL ANOMALIES OF THE INTEGUMENT |
 758 CHROMOSOMAL ANOMALIES                |
 759 OTHER & UNSPECIFIED CONG ANOMALIES   |
--------------------------------------------------------------
 760 NEWBORN AFFECTED BY MATERNAL CONDITIONS | 106.FETUS WITH
 761 NEWBORN AFFECTED BY MATER COMPLICATIONS |     COMPLICATIONS
 762 NEWBORN AFF BY COMP OF PLACENTA, ETC |
 763 NEWBORN AFF BY LABOUR & DELIVERY     |
--------------------------------------------------------------
 764 SLOW FETAL GROWTH & MALNUTRITION     | 107.ABNORMAL GROWTH
 765 SHORT GESTATION & UNSPEC LOW BIRTH WT |
 766 LONG GESTATION & HIGH BIRTH WEIGHT   |
--------------------------------------------------------------
 767 BIRTH TRAUMA                         | 108.BIRTH TRAUMA
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****             CAUSE OF DEATH CODES                    ****
***        ICD9 AND THE AGGREGATED GROUP OF 127           ***
****         PROGRAM - HLH1.JCL.CNTL(PRINT2)             ****
*****         DATA - HLH1.DOC.DATA(ICD9)                *****
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       ICD9 CODE                                ONTARIO CODES
------------------------------------------------------------------
768 INTRAUTERINE HYPOXIA & BIRTH ASPHYXIA   | 109.RESPIRATORY PROBLEMS
769 RESPIRATORY DISTRESS SYNDROME           |
770 OTHER RESPIRATORY - FETUS & NEWBORN     |
------------------------------------------------------------------
771 INFECTIONS SPECIFIC TO PERINATAL PERIOD | 110.OTHER PERINATAL
772 FETAL & NEONATAL HAEMORRHAGE            |
773 HAEMOLYTIC DISEASE - ISOIMMUNIZATION    |
774 OTHER PERINATAL JAUNDICE                |
775 ENDOCRINE & METABOLIC-FETUS & NEWBORN   |
776 HAEMATOLOGICAL DISORDERS FETUS & NEWBORN|
777 PERINATAL DISORDERS DIGESTIVE SYSTEM    |
778 INTEGUMENT & TEMP REG FETUS & NEWBORN   |
779 OTHER & ILL-DEFINED PERINATAL           |
------------------------------------------------------------------
780 GENERAL SYMPTOMS                        | 111.ILL DEFINED CONDITION
781 SYMPTOMS-NERVOUS & MUSCULOSKELETAL SYS  |
782 SYMPTOMS-SKIN & OTHER INTEGUMENTARY TISS|
783 SYMP-NUTRITION, METABOLISM & DEVELOPMENT|
784 SYMPTOMS INVOLVING HEAD & NECK          |
785 SYMPTOMS INVOLVING CARDIOVASCULAR SYSTEM|
786 SYMP-RESPIRATORY SYSTEM& OTHER CHEST    |
787 SYMPTOMS INVOLVING DIGESTIVE SYSTEM     |
788 SYMPTOMS INVOLVING URINARY SYSTEM       |
789 OTHER SYMPTOMS ABDOMEN & PELVIS         |
790 NONSPECIFIC FINDINGS ON BLOOD           |
791 NONSPECIFIC FINDINGS ON URINE           |
792 NONSPECIFIC ABNORMAL FINDINGS OTHER BODY|
793 NONSPEC ABN FIND RADIOLOGICAL & OTHER   |
794 NONSPEC ABN RESULTS FUNCTION STUDIES    |
795 NONSPEC ABN HISTOLOG & IMMUNOLOG FIND   |
796 OTHER NONSPECIFIC ABNORMAL FINDINGS     |
797 SENILITY WITHOUT PSYCHOSIS              |
798 SUDDEN DEATH, CAUSE UNKNOWN             |
799 OTHER ILL-DEFINED & UNKNOWN             |
------------------------------------------------------------------
800 RAILWAY ACC-COLLISION ROLLING STOCK     | 113.OTHER TRANSPORT ACCID
801 RAILWAY ACC-COLLISION OTHER OBJECT      |
802 RLWY ACC-DERAILMENT NO ANTECEDENT COLLIS|
803 RLWY ACC-EXPLOSION, FIRE OR BURNING     |
804 FALL IN, ON OR FROM RAILWAY TRAIN       |
805 HIT BY ROLLING STOCK                    |
806 OTHER SPECIFIED RAILWAY ACCIDENT        |
807 RLWY ACC-UNSPECIFIED NATURE             |
------------------------------------------------------------------
810 MOTOR VEHICLE ACCIDENT WITH TRAIN       | 112.MOTOR VEHICLE ACCID
811 M V TRAFFIC ACC RE-ENTRANT COLL WITH M V|
812 OTHER M V T A - COLL WITH ANOTHER M V   |
813 M V T A - COLLISION WITH OTHER VEHICLE  |
814 M V T A - COLLISION WITH PEDESTRIAN     |
815 OTHER M V T A -COLLISION ON HIGHWAY     |
*************************************************************
*****                                                   *****
****              CAUSE OF DEATH CODES                   ****
***         ICD9 AND THE AGGREGATED GROUP OF 127          ***
****          PROGRAM - HLHI.JCL.CNTL(PRINT2)            ****
*****            DATA - HLHI.DOC.DATA(ICD9)             *****
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      ICD9 CODE                                            ONTARIO CODES
816 M V T A-LOSS OF CONTROL-HWY-NO COLLISION|
817 NONCOLLISION M V T A-BOARD OR ALIGHT    |
818 OTHER NONCOLLISION M V T A              |
819 M V T A-UNSPECIFIED NATURE              |
-------------------------------------------------------------------------
820 NONTRAFFIC ACC-MOTOR DRIVEN SNOW VEHICLE| 113.OTHER TRANSPORT ACCID
821 NONTRAF ACC-OTHER OFF-ROAD MOTOR VEHICLE|
822 OTHER M V NONTRAF ACC-COLL WITH MOV OBJ |
823 OTHER M V NONTRAF ACC-COLL STATIONARY OB|
824 OTHER M V NONTRAF ACC-BOARD & ALIGHTING |
825 OTHER M V NONTRAF ACC-OTHER & UNSPEC    |
826 PEDAL CYCLE ACCIDENT                    |
827 ANIMAL-DRAWN VEHICLE ACCIDENT           |
828 ACC-ANIMAL BEING RIDDEN                 |
829 OTHER ROAD VEHICLE ACCIDENT             |
830 ACC TO WATERCRAFT CAUSING SUBMERSION    |
831 ACC TO WATERCRAFT CAUSING OTHER INJURY  |
832 OTHER ACC SUBMERS OR DROWN-WATER TRANS  |
833 FALL-STAIRS OR LADDER IN WATER TRANSPORT|
834 OTHER FALL FROM ONE LEVEL IN WATER TRANS|
835 OTHER & UNSPEC FALL-WATER TRANSPORT     |
836 MACHINERY ACCIDENT-WATER TRANSPORT      |
837 EXPLOSION, FIRE OR BURNING-WATERCRAFT   |
838 OTHER AND UNSPEC WATER TRANSPORT ACC    |
840 ACC-POWERED AIRCRAFT-TAKEOFF OR LANDING |
841 ACC-POWERED AIRCRAFT-OTHER & UNSPEC     |
842 ACC-UNPOWERED AIRCRAFT                  |
843 FALL IN, ON OR FROM AIRCRAFT            |
844 OTHER UNSPEC AIR TRANSPORT ACCIDENTS    |
845 ACC INVOLVING SPACECRAFT                |
846 ACC-POWER VEH USED ON INDUSTRIAL PREM   |
847 ACC-CABLE CARS NOT RUNNING ON RAILS     |
848 ACC-OTHER VEHICLES NEC                  |
-------------------------------------------------------------------------
850 ACC POISONING ANALGESICS, ETC           | 114.DRUG POISONING
851 ACC POISONING BARBITURATES              |
852 ACC POISONING OTHER SEDATIVES & HYPNOTIC|
853 ACC POISONING TRANQUILLIZERS            |
854 ACC POISONING OTHER PSYCHOTROPIC AGENTS |
855 ACC POIS OTHER DRUGS EFFECT NERVOUS SYS |
856 ACCIDENTAL POISONING ANTIBIOTICS        |
857 ACCIDENTAL POISONING ANTI-INFECTIVES    |
858 ACCIDENTAL POISONING OTHER DRUGS        |
-------------------------------------------------------------------------
860 ACC POISONING ALCOHOL NEC               | 115.SOLID, LIQUID
861 ACC POIS DISINFECTANT, PAINT, VARNISH   |       POISONING
862 ACC POIS PETROL PROD,SOLVENTS,VAPOURS   |
863 ACC POIS CHEMICAL & PHARMACEUTICAL PREP |
864 ACC POIS CORROSIVES & CAUSTICS NEC      |
865 ACC POIS FOODSTUFFS & POISONOUS PLANTS  |
866 ACC POIS OTHER & UNSPEC SOLID & LIQUID  |
**************************************************************
*****                                                    *****
****             CAUSE OF DEATH CODES                     ****
***        ICD9 AND THE AGGREGATED GROUP OF 127            ***
****          PROGRAM - HLH1.JCL.CNTL(PRINT2)             ****
*****          DATA - HLH1.DOC.DATA(ICD9)                *****
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       ICD9 CODE                                    ONTARIO CODES
--------------------------------------------------------------------
867 ACC POIS GAS BY PIPELINE                   | 116.GAS VAPOUR POISONING
868 ACC POIS OTHER UTILITY GAS & CARB MONOX    |
869 ACC POIS OTHER GASES & VAPOURS             |
--------------------------------------------------------------------
870 ACC CUT,PUNCTURE,ETC DURING MEDICAL CARE   | 117.SURGICAL COMPLICATION
871 FOREIGN OBJECT LEFT IN BODY-PROCEDURE      |
872 FAILURE OF STERILE PRECAUTIONS-PROCEDURE   |
873 FAILURE IN DOSAGE                          |
874 MECHANICAL FAILURE DURING PROCEDURE        |
875 CONTAMINATED OR INFECTED BLOOD ETC         |
876 OTHER & UNSPEC DURING MEDICAL CARE         |
878 SURGICAL OPERATION - REACTION              |
879 OTHER PROCEDURES - REACTION                |
--------------------------------------------------------------------
880 FALL ON OR FROM STAIRS OR STEPS            | 118.FALLS
881 FALL ON OR FROM LADDERS OR SCAFFOLDING     |
882 FALL ON OR OUT OF BUILDING OR STRUCTURE    |
883 FALL INTO HOLE OR OTHER SURFACE OPENING    |
884 OTHER FALL FROM ONE LEVEL TO ANOTHER       |
885 FALL SAME LEVEL SLIP,TRIP,STUMBLE          |
886 FALL SAME LEVEL - ANOTHER PERSON           |
887 FRACTURE, CAUSE UNSPECIFIED                |
888 OTHER & UNSPECIFIED FALL                   |
--------------------------------------------------------------------
890 CONFLAGRATION - PRIVATE DWELLING           | 119.BURNS
891 CONFLAGRATION OTHER & UNSPEC STRUCTURE     |
892 CONFLAGRATION-NO BUILDING OR STRUCTURE     |
893 ACC IGNITION OF CLOTHING                   |
894 IGNITION HIGHLY INFLAMMABLE MATERIAL       |
895 ACC-CONTROLLED FIRE IN PRIVATE DWELLING    |
896 ACC-CONTROLLED FIRE IN OTHER STRUCTURE     |
897 ACC-CONTROLLED FIRE NO BUILD OR STRUCT     |
898 ACC-OTHER SPECIFIED FIRE AND FLAMES        |
899 ACC-UNSPECIFIED FIRE                       |
--------------------------------------------------------------------
900 EXCESSIVE HEAT                             | 122.OTHER ACCIDENTS
901 EXCESSIVE COLD                             |
902 HIGH/LOW/CHANGES-AIR PRESSURE              |
903 TRAVEL & MOTION                            |
904 HUNGER,THIRST,EXPOSURE,NEGLECT             |
905 VENOMOUS ANIMALS & PLANTS-POISONING        |
906 OTHER INJURY BY ANIMALS                    |
907 LIGHTNING                                  |
908 CATACLYSMIC STORMS,FLOODS FROM STORMS      |
909 CATACLYSMIC EARTH MOVEMENTS & ERUPTIONS    |
--------------------------------------------------------------------
910 ACCIDENTAL DROWNING & SUBMERSION           | 120.DROWNING
--------------------------------------------------------------------
911 INHALATION & INGESTION OF FOOD-SUFFOCAT    | 122.OTHER ACCIDENT
912 INHAL & INGEST OTHER OBJECT-SUFFOCATION    |
**************************************************************
*****                                                    *****
****                 CAUSE OF DEATH CODES                 ****
***           ICD9 AND THE AGGREGATED GROUP OF 127         ***
****            PROGRAM - HLH1.JCL.CNTL(PRINT2)           ****
*****             DATA - HLH1.DOC.DATA(ICD9)             *****
**************************************************************

      ICD9 CODE                                     ONTARIO CODES
913 ACCIDENTAL MECHANICAL SUFFOCATION          |
914 FOREIGN BODY ENTERING EYE & ADNEXA-ACC     |
915 FOREIGN BODY ENTERING OTHER ORIFICE-ACC    |
916 STRUCK ACC BY FALLING OBJECT               |
917 STRUCK ACC BY OBJECT OR PERSON             |
918 CAUGHT ACC IN OR BETWEEN OBJECTS           |
919 ACC CAUSED BY MACHINERY                    |
920 ACC CUTTING/PIERCING INSTRUMENTS           |
921 ACC EXPLOSION OF PRESSURE VESSEL           |
922 ACC FIREARM MISSILE                        |
923 ACC BY EXPLOSIVE MATERIAL                  |
924 ACC HOT OBJECT,CAUSTIC OR CORROSIVE MAT    |
925 ACC BY ELECTRIC CURRENT                    |
926 EXPOSURE TO RADIATION                      |
927 OVEREXERTION & STRENUOUS MOVEMENTS         |
928 OTHER & UNSPEC ENVIRON & ACCIDENTAL        |
929 LATE EFFECTS ACCIDENTAL INJURY             |
------------------------------------------------------------------
930 ANTIBIOTICS                                | 124.DRUG ADVERSE EFFECT
931 OTHER ANTI-INFECTIVES                      |
932 HORMONES & SYNTHETIC SUBSTITUTES           |
933 PRIMARILY SYSTEMIC AGENTS                  |
934 AGENTS AFFECTING BLOOD CONSTITUENTS        |
935 ANALGESICS,ANTIPYRETICS,ANTIRHEUMATICS     |
936 ANTICONVULSANTS & ANTI-PARKINSONISM DRUG   |
937 SEDATIVES & HYPNOTICS                      |
938 OTHER C N S DEPRESSANTS                    |
939 PSYCHOTROPIC AGENTS                        |
940 C N S STIMULANTS                           |
941 DRUGS AFFECT AUTONOMIC NERVOUS SYSTEM      |
942 AGENTS AFFECT CARDIOVASCULAR SYSTEM        |
943 AGENTS AFFECT GASTROINTESTINAL SYSTEM      |
944 WATER,MINERAL,URIC ACID METABOLISM DRUG    |
945 AGENTS SKELETAL MUSCLE,RESPIRATORY SYS     |
946 AGENTS SKIN, MUCOUS MEMBRANE ETC           |
947 OTHER & UNSPEC DRUGS & MEDICAMENTS         |
948 BACTERIAL VACCINES                         |
949 OTHER VACCINES & BIOLOGICAL SUBSTANCES     |
------------------------------------------------------------------
950 SUICIDE POISONING SOLID OR LIQUID          | 125.SUICIDE
951 SUICIDE POISONING DOMESTIC GASES           |
952 SUICIDE OTHER GASES & VAPOURS              |
953 SUICIDE HANGING,STRANGULATION,SUFFOCAT     |
954 SUICIDE SUBMERSION (DROWNING)              |
955 SUICIDE FIREARMS & EXPLOSIVES              |
956 SUICIDE CUTTING & PIERCING INSTRUMENTS     |
957 SUICIDE JUMPING FROM HIGH PLACE            |
958 SUICIDE OTHER & UNSPECIFIED MEANS          |
959 LATE EFFECTS OF SELFINFLICTED INJURY       |
------------------------------------------------------------------
960 FIGHT, BRAWL, RAPE                         | 126.HOMICIDE
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*****                                                 *****
****             CAUSE OF DEATH CODES                  ****
***        ICD9 AND THE AGGREGATED GROUP OF 127         ***
****         PROGRAM - HLH1.JCL.CNTL(PRINT2)           ****
*****          DATA - HLH1.DOC.DATA(ICD9)             *****
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        ICD9 CODE                                      ONTARIO CODES
961 ASSAULT CORROSIVE,CAUSTIC SUBSTANCE        |
962 ASSAULT BY POISONING                       |
963 ASSAULT HANGING AND STRANGULATION          |
964 ASSAULT SUBMERSION (DROWNING)              |
965 ASSAULT FIREARMS & EXPLOSIVES              |
966 ASSAULT CUTTING & PIERCING INSTRUMENTS     |
967 CHILD BATTERING & OTHER MALTREATMENT       |
968 ASSAULT OTHER & UNSPECIFIED MEANS          |
969 LATE EFFECTS INJURY PURPOSELY INFLICT      |
-----------------------------------------------+-------------------------------
970 INJURY-LEGAL INTERVENTION FIREARMS         | 127.OTHER EXTERNAL INJURY
971 INJURY-LEGAL INTERVENTION EXPLOSIVES       |
972 INJURY-LEGAL INTERVENTION GAS              |
973 INJURY-LEGAL INTERVENTION BLUNT OBJECT     |
974 INJURY-L I CUTTING & PIERCING INSTRUMENT   |
975 INJURY-L I BY OTHER SPECIFIED MEANS        |
976 INJURY-L I BY UNSPECIFIED MEANS            |
977 LATE EFFECTS INJURIES-LEGAL INTERVENTION   |
978 LEGAL EXECUTION                            |
980 POISONING SOLID OR LIQUID-UNDETERMINED     |
981 POISONING DOMESTIC GAS-UNDETERMINED        |
982 POISONING OTHER GASES-UNDETERMINED         |
983 HANGING,STRANGULATION,ETC UNDETERMINED     |
984 SUBMERSION(DROWNING)-UNDETERMINED          |
985 INJURY FIREARMS & EXPLOSIVE-UNDETERMINED   |
986 INJURY CUTTING & PIERCING-UNDETERMINED     |
987 FALLING FROM HIGH PLACE-UNDETERMINED       |
988 INJURY OTHER & UNSPECIFIED-UNDETERMINED    |
989 LATE EFFECTS INJURY-UNDETERMINED           |
990 INJURY WAR OPS BY FIRE & CONFLAGRATION     |
991 INJURY WAR OPS BULLETS & FRAGMENTS         |
992 INJURY WAR OPS EXPLOSION MARINE WEAPONS    |
993 INJURY WAR OPS OTHER EXPLOSIONS            |
994 INJURY WAR OPS DESTRUCTION OF AIRCRAFT     |
995 INJURY WAR OPS OTHER CONVENTIONAL WAR      |
996 INJURY WAR OPS NUCLEAR WEAPONS             |
997 INJURY WAR OPS OTHER UNCONVENTIONAL WAR    |
998 INJURY WAR OPS AFTER CESSATION HOSTILITY   |
999 LATE EFFECTS INJURY DUE TO WAR OPERATION   |
|
|
* - THE ONTARIO CODE HAS SEPARATED THE ICD9 CODE INTO TWO SEPARATE
CODES, BY IT'S FOURTH DIGIT.
IE. THE ONTARIO CODE 57 IS ICD9 = 415.1 AND
ONTARIO CODE 58 IS ICD9 = 415.2 TO 415.9.
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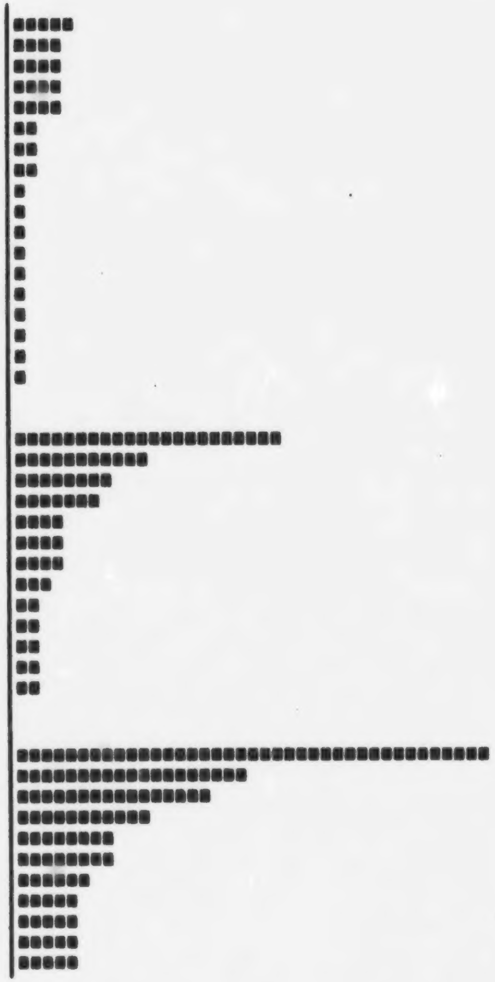
APPENDIX 2 (a)

MAJOR AGE- SEX- AND CAUSE- SPECIFIC MORTALITY RATES* IN WESTERN HEALTH AREA MALES, 1981

AGE GROUP	CAUSE		RATE*
1-4	CONG.HEART AND C	■	29.129
	CA,UNSPEC.SITES	■	29.129
5-14	DROWNING,SUBMER.		9.653
	OTH.PUL.EMBOLISM		9.653
15-24	SUICIDE	■	29.715
	BURNS	■	14.858
	HOMICIDE		7.429
	OTHER ACCIDENTS		7.429
	OTH. TRANSPORT A		7.429
	MOTOR VEHICLE A.		7.429
	INTRACEREBRAL		7.429
	CA,BONE,TISSUE		7.429
	CA,SKIN		7.429
25-34	SUICIDE	■■■■	71.783
	MYOCARDIAL INF.	■■	32.629
	MOTOR VEHICLE A.	■	19.577
	OTHER EXT.INJURY	■	13.051
	SUBARACHNOID	■	13.051
	HOMICIDE		6.526
	OTHER ACCIDENTS		6.526
	DRUG POISONING		6.526
	ILL DEFINED COND		6.526
	CIRRHOSIS		6.526
	INTRACEREBRAL		6.526
	ISCHAEMIC HEART		6.526
	ALL OTHER CNS		6.526
35-44	SUICIDE	■■■	69.541
	MOTOR VEHICLE A.	■■	39.738
	CIRRHOSIS	■	29.803
	OTHER ACCIDENTS	■	19.869
	MYOCARDIAL INF.	■	19.869
	CA,TRACHEA,LUNG	■	19.869
	OTHER EXT.INJURY		9.934
	ILL DEFINED COND		9.934
	EPILEPSY		9.934
	ALL MENTAL DIS.		9.934
	ALCOHOL AND DRUG		9.934
	DIABETES MEL.		9.934
	CA,LYMPHATIC		9.934
	CA,UNSPEC.SITES		9.934
	CA,ORAL CAVITY		9.934

APPENDIX 2 (b)

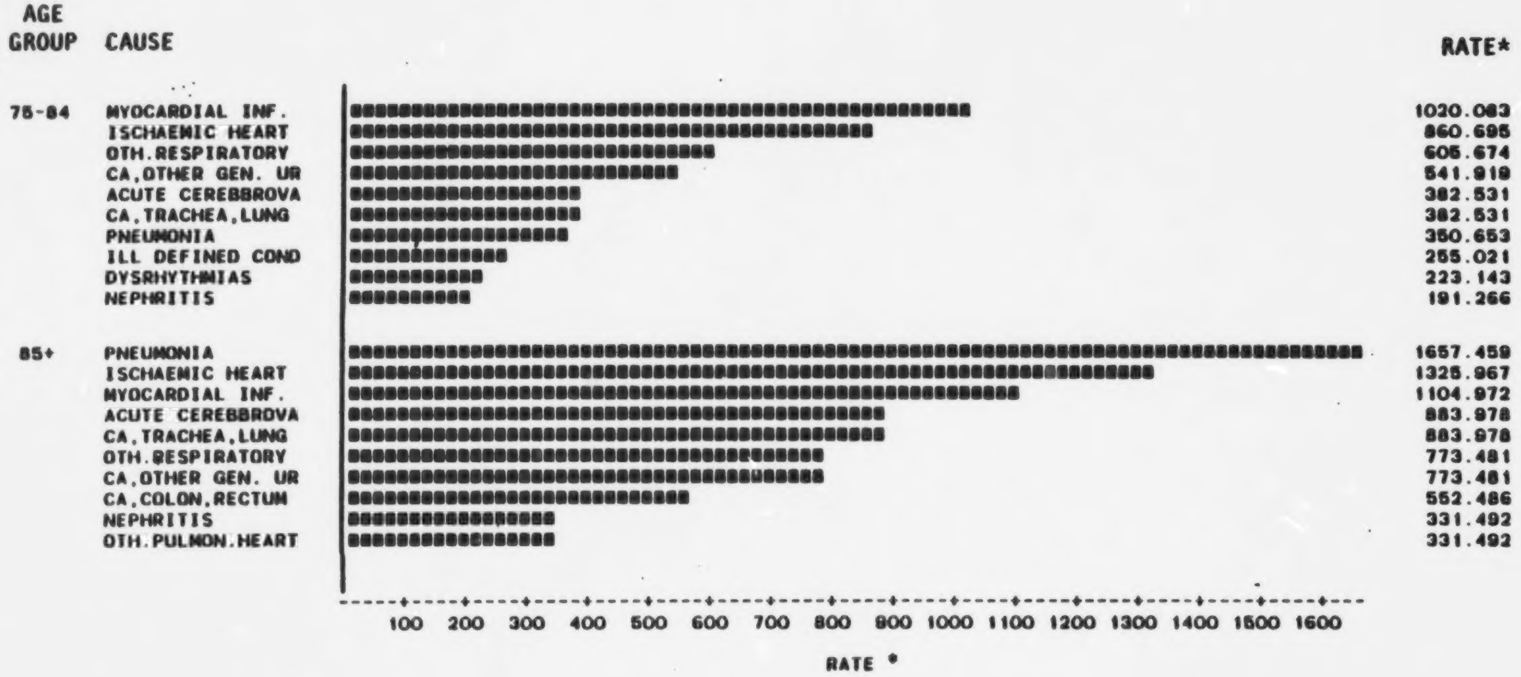
MAJOR AGE- SEX- AND CAUSE- SPECIFIC MORTALITY RATES* IN WESTERN HEALTH AREA MALES, 1981



AGE GROUP	CAUSE	RATE*
45-54	CA,TRACHEA,LUNG	101.226
	SUICIDE	89.979
	CIRRHOSIS	89.979
	ISCHAEMIC HEART	78.731
	MYOCARDIAL INF.	78.731
	OTHER ACCIDENTS	33.742
	ALCOHOL AND DRUG	33.742
	CA,UNSPEC.SITES	33.742
	HOMICIDE	22.495
	FALLS	22.495
	DRUG POISONING	22.495
	OTHER DIGESTIVE	22.495
	OTH.RESPIRATORY	22.495
	OTH.PULMON.HEART	22.495
	CA,BRAIN	22.495
	CA,LARYNX	22.495
	CA,OTHER DIGEST	22.495
	CA,COLON,RECTUM	22.495
55-64	MYOCARDIAL INF.	440.739
	CA,TRACHEA,LUNG	226.325
	CA,UNSPEC.SITES	154.854
	ISCHAEMIC HEART	131.030
	CA,STOMACH	83.383
	CIRRHOSIS	71.471
	CA,OTHER DIGEST	71.471
	CA,COLON,RECTUM	59.559
	OTHER DIGESTIVE	47.647
	PNEUMONIA	47.647
	CA,LYMPHATIC	47.647
	CA,OTHER GEN. UR	47.647
	CA,ORAL CAVITY	47.647
65-74	MYOCARDIAL INF.	779.313
	ISCHAEMIC HEART	389.656
	CA,TRACHEA,LUNG	318.810
	ACUTE CEREBBROVA	212.540
	CA,OTHER GEN. UR	159.405
	CA,COLON,RECTUM	159.405
	CA,UNSPEC.SITES	123.982
	ILL DEFINED COND	106.270
	OTH.RESPIRATORY	106.270
	PNEUMONIA	106.270
	ART.EMBO. AND TH	106.270

APPENDIX 2 (c)

MAJOR AGE- SEX- AND CAUSE- SPECIFIC MORTALITY RATES* IN WESTERN HEALTH AREA MALES, 1981



AGE GROUP	CAUSE	RATE*
75-84	MYOCARDIAL INF.	1020.083
	ISCHAEMIC HEART	860.695
	OTH.RESPIRATORY	605.674
	CA,OTHER GEN. UR	541.919
	ACUTE CEREBBROVA	382.531
	CA,TRACHEA,LUNG	382.531
	PNEUMONIA	350.653
	ILL DEFINED COND	255.021
	DYSRHYTHMIAS	223.143
	NEPHRITIS	191.266
85+	PNEUMONIA	1657.459
	ISCHAEMIC HEART	1325.967
	MYOCARDIAL INF.	1104.972
	ACUTE CEREBBROVA	883.978
	CA,TRACHEA,LUNG	883.978
	OTH.RESPIRATORY	773.481
	CA,OTHER GEN. UR	773.481
	CA,COLON,RECTUM	552.486
	NEPHRITIS	331.492
	OTH.PULMON.HEART	331.492

100
200
300
400
500
600
700
800
900
1000
1100
1200
1300
1400
1500
1600
RATE *

* Per 100,000 males

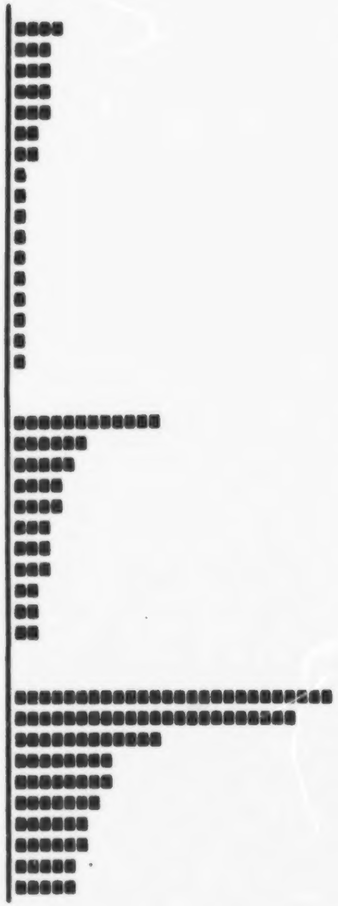
APPENDIX 3 (a)

MAJOR AGE- SEX- AND CAUSE- SPECIFIC MORTALITY RATES* IN WESTERN HEALTH AREA FEMALES, 1981

AGE GROUP	CAUSE		RATE*
1-4	SPINA BIFIDA	■	31.124
	ALL OTHER CNS	■	31.124
5-14	OTHER METABOLIC		10.143
	CA,BRAIN		10.143
15-24	OTHER EXT.INJURY		7.525
	MOTOR VEHICLE A.		7.525
25-34	MOTOR VEHICLE A.	■	19.440
	SUICIDE	■	12.960
	OTHER EXT.INJURY		6.480
	OTHER ACCIDENTS		6.480
	DROWNING,SUBMER.		6.480
	ALL OTH.ABORTION		6.480
	CIRRHOSIS		6.480
	SUBARACHNOID		6.480
	DYSRHYTHMIAS		6.480
	ALL OTHER CNS		6.480
	LEUKAEMIA		6.480
35-44	CA,BRAIN	■	20.689
	SUICIDE		10.344
	DRUG ADVERSE EFF		10.344
	BURNS		10.344
	ABDOMINAL HERNIA		10.344
	SUBARACHNOID		10.344
	MULT.SCLEROSIS		10.344
	CA,OTHER GEN. UR		10.344
	CA,UTERUS		10.344
45-54	CA,COLON,RECTUM	■■	46.555
	SUICIDE	■	34.916
	CA,FEMALE BREAST	■	34.916
	HOMICIDE	■	23.277
	MOTOR VEHICLE A.	■	23.277
	OTHER DIGESTIVE	■	23.277
	CIRRHOSIS	■	23.277
	CA,OTHER GEN. UR	■	23.277
	CA,OTHER DIGEST	■	23.277
	INTESTINAL OBST.		11.639
	DYSRHYTHMIAS		11.639
	ISCHAEMIC HEART		11.639
	MYOCARDIAL INF.		11.639
	ALL MENTAL DIS.		11.639
	OTHER METABOLIC		11.639
	OTHER UNSPEC.CA		11.639
	CA,BRAIN		11.639
	CA,UTERUS		11.639
	CA,TRACHEA,LUNG		11.639

APPENDIX 3 (b)

MAJOR AGE- SEX- AND CAUSE- SPECIFIC MORTALITY RATES* IN WESTERN HEALTH AREA FEMALES, 1981

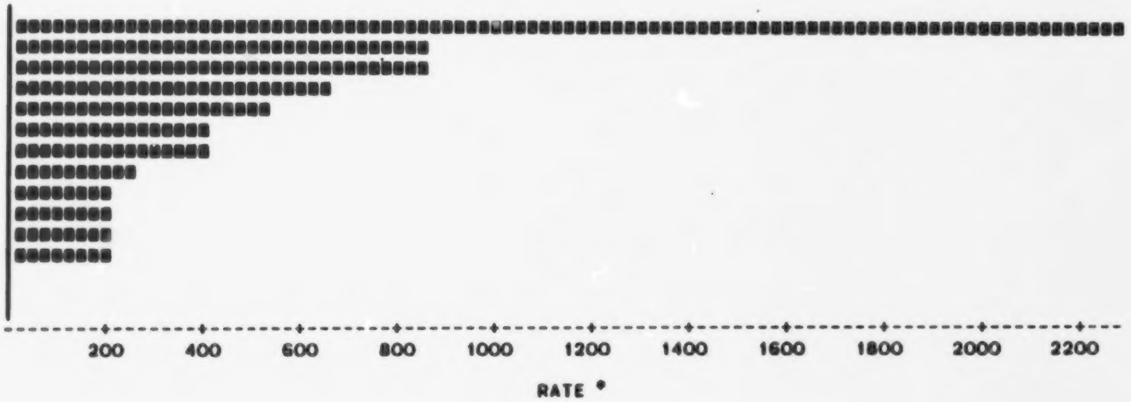


AGE GROUP	CAUSE	RATE*
55-64	CA,OTHER GEN. UR	94.018
	MYOCARDIAL INF.	82.266
	CA,FEMALE BREAST	82.266
	CA,TRACHEA,LUNG	82.266
	CA,UNSPEC.SITES	70.514
	CA,OTHER DIGEST	47.009
	CA,COLON,RECTUM	47.009
	ISCHAEMIC HEART	35.257
	OTHER ACCIDENTS	23.505
	ILL DEFINED COND	23.505
	CIRRHOSIS	23.505
	PNEUMONIA	23.505
	ACUTE CEREBBROVA	23.505
	RHEUMATIC HEART	23.505
	DIABETES MEL.	23.505
	LEUKAEMIA	23.505
	CA,CERVIX UTERI	23.505
65-74	MYOCARDIAL INF.	288.832
	ACUTE CEREBBROVA	144.416
	ISCHAEMIC HEART	128.370
	CA,UNSPEC.SITES	96.277
	CA,FEMALE BREAST	96.277
	ILL DEFINED COND	80.231
	CA,OTHER GEN. UR	64.185
	CA,TRACHEA,LUNG	64.185
	OTH.RESPIRATORY	48.139
	CA,CERVIX UTERI	48.139
	CA,COLON,RECTUM	48.139
75-84	MYOCARDIAL INF.	640.293
	ISCHAEMIC HEART	571.690
	ACUTE CEREBBROVA	297.279
	ILL DEFINED COND	205.808
	PNEUMONIA	205.808
	OTH.PULMON.HEART	182.941
	CA,FEMALE BREAST	160.073
	CA,TRACHEA,LUNG	160.073
	OTHER DIGESTIVE	137.206
	ALL OTHER CNS	114.338

APPENDIX 3 (c)

MAJOR AGE- SEX- AND CAUSE- SPECIFIC MORTALITY RATES* IN WESTERN HEALTH AREA FEMALES, 1981

AGE GROUP	CAUSE	RATE*
85+	ISCHAEMIC HEART	2271.252
	PNEUMONIA	843.608
	MYOCARDIAL INF.	843.608
	ACUTE CEREBBROVA	648.929
	OTH.RESPIRATORY	519.143
	FALLS	389.358
	CEREBRO.ATHEROS	389.358
	ATHEROSCLEROSIS	259.572
	ILL DEFINED COND	194.679
	DYSRHYTHMIAS	194.679
	PSYCHOSES	194.679
	CA.FEMALE BREAST	194.679



* Per 100,000 females

APPENDIX 4 (a)

MAJOR AGE- SEX- AND CAUSE- SPECIFIC MORTALITY RATES* IN NORTHERN HEALTH AREA MALES, 1981

AGE GROUP	CAUSE	RATE*
1-4	CA,UNSPEC.SITES	27.465
5-14	DROWNING,SUBMER.	7.992
	MOTOR VEHICLE A.	7.992
	ILL DEFINED COND	7.992
	PNEUMONIA	7.992
	VIRAL HEPATITIS	7.992
15-24	SUICIDE	18.354
	MOTOR VEHICLE A.	12.236
	ALL OTHER CNS	12.236
	OTHER EXT.INJURY	6.118
	HOMICIDE	6.118
	ALCOHOL AND DRUG	6.118
	CA,OTHER GEN. UR	6.118
25-34	OTH. TRANSPORT A	14.906
	MOTOR VEHICLE A.	14.906
	SUICIDE	9.937
	FALLS	9.937
	OTHER ACCIDENTS	4.969
	ILL DEFINED COND	4.969
	OTHER DIGESTIVE	4.969
	VEINS,LYMPHATICS	4.969
	ART.EMBO. AND TH	4.969
	ALL MENTAL DIS.	4.969
	CA,LYMPHATIC	4.969
	HODGKIN S DIS.	4.969
	CA,UNSPEC.SITES	4.969
	CA,BRAIN	4.969
35-44	CIRRHOSIS	28.139
	OTHER EXT.INJURY	14.070
	SUICIDE	14.070
	CA,COLON,RECTUM	14.070
	HOMICIDE	7.035
	FALLS	7.035
	NEPHRITIS	7.035
	OTHER DIGESTIVE	7.035
	VEINS,LYMPHATICS	7.035
	ARTERIES,CAPILL.	7.035
	SUBARACHNOID	7.035
	MYOCARDIAL INF.	7.035
	ALL OTHER CNS	7.035
	PSYCHOSES	7.035
	CA,OTHER DIGEST	7.035

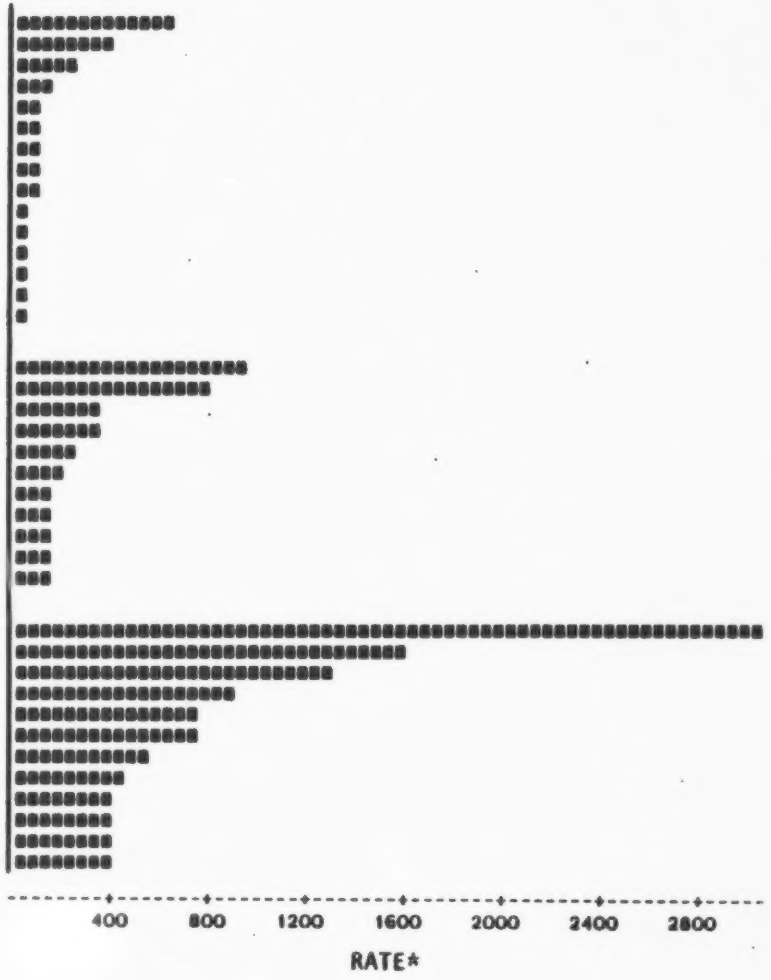
APPENDIX 4 (b)

MAJOR AGE- SEX- AND CAUSE- SPECIFIC MORTALITY RATES* IN NORTHERN HEATLH AREA MALES, 1981

AGE GROUP	CAUSE		RATE*
45-54	MYOCARDIAL INF.	■■	84.161
	CA,TRACHEA,LUNG	■	58.913
	SUICIDE	■	25.248
	ISCHAEMIC HEART	■	25.248
	CA,OTHER GEN. UR	■	25.248
	INTRACEREBRAL		16.832
	CA,OTHER DIGEST		16.832
	OTHER EXT.INJURY		8.416
	DROWNING,SUBMER.		8.416
	FALLS		8.416
	MOTOR VEHICLE A.		8.416
	ILL DEFINED COND		8.416
	OTHER DIGESTIVE		8.416
	CIRRHOSIS		8.416
	EMPHYSEMA,ASTHMA		8.416
	VEINS,LYMPHATICS		8.416
	ATHEROSCLEROSIS		8.416
	CEREBRAL INFARC.		8.416
	OTH.PULMON.HEART		8.416
	ALL MENTAL DIS.		8.416
	PSYCHOSES		8.416
	CA,UNSPEC.SITES		8.416
	CA,BONE,TISSUE		8.416
	CA,STOMACH		8.416
	CA,ORAL CAVITY		8.416
	OTHER PARASITIC		8.416
55-64	MYOCARDIAL INF.	■■■■■	232.854
	CA,TRACHEA,LUNG	■■■■	190.517
	ISCHAEMIC HEART	■■	105.843
	CA,OTHER DIGEST	■	74.090
	ALCOHOL AND DRUG	■	63.506
	PNEUMONIA	■	42.337
	ACUTE CEREBBROVA	■	42.337
	OTHER DIGESTIVE	■	31.753
	CIRRHOSIS	■	31.753
	RHEUMATIC HEART	■	31.753
	CA,STOMACH	■	31.753

APPENDIX 4 (c)

MAJOR AGE- SEX- AND CAUSE- SPECIFIC MORTALITY RATES* IN NORTHERN HEATLH AREA MALES, 1981



AGE GROUP	CAUSE	RATE*
65-74	MYOCARDIAL INF.	639.932
	ISCHAEMIC HEART	398.180
	CA,TRACHEA,LUNG	270.193
	CA,COLON,RECTUM	156.428
	ILL DEFINED COND	113.766
	ACUTE CEREBBROVA	113.766
	CA,OTHER GEN. UR	113.766
	INTRACEREBRAL	99.545
	CEREBRAL INFARC.	85.324
	CIRRHOSIS	56.883
	ART.EMBO. AND TH	56.883
	ALL OTHER CNS	56.883
	CA,LYMPHATIC	56.883
	CA,OTHER DIGEST	56.883
	CA,STOMACH	56.883
75-84	MYOCARDIAL INF.	932.791
	ISCHAEMIC HEART	789.285
	CA,TRACHEA,LUNG	358.766
	OTH.RESPIRATORY	334.848
	ACUTE CEREBBROVA	263.095
	CA,OTHER GEN. UR	215.260
	OTHER DIGESTIVE	167.424
	ART.EMBO. AND TH	167.424
	DIABETES MEL.	167.424
	CA,OTHER DIGEST	167.424
	CA,COLON,RECTUM	167.424
85+	ISCHAEMIC HEART	3065.134
	MYOCARDIAL INF.	1609.195
	PNEUMONIA	1302.682
	CA,OTHER GEN. UR	919.540
	FALLS	766.284
	ACUTE CEREBBROVA	766.284
	CA,TRACHEA,LUNG	536.398
	ATHEROSCLEROSIS	459.770
	OTHER DIGESTIVE	383.142
	OTH.RESPIRATORY	383.142
	ART.EMBO. AND TH	383.142
	DYSRHYTHMIAS	383.142

* Per 100,000 males

APPENDIX 5 (a)

MAJOR AGE- SEX- AND CAUSE- SPECIFIC MORTALITY RATES*
IN NORTHERN HEALTH AREA FEMALES, 1981

AGE GROUP	CAUSE	RATE*
1-4	OTHER ACCIDENTS	28.393
5-14	MOTOR VEHICLE A.	8.515
	ANAEMIAS	8.515
15-24	OTHER METABOLIC	11.320
	OTHER EXT.INJURY	5.660
	SUICIDE	5.660
	CONG.HEART AND C	5.660
	MUSCULOSKELETAL	5.660
	CA,UNSPEC.SITES	5.660
25-34	SUICIDE	16.795
	MOTOR VEHICLE A.	12.596
	LEUKAEMIA	8.397
	OTHER EXT.INJURY	4.199
	FALLS	4.199
	ILL DEFINED COND	4.199
	MUSCULOSKELETAL	4.199
	CEREBRAL INFARC.	4.199
	MYOCARDIAL INF.	4.199
	ALCOHOL AND DRUG	4.199
	DIABETES MEL.	4.199
	CA,LYMPHATIC	4.199
	CA,FEMALE BREAST	4.199
	CA,SKIN	4.199
35-44	CIRRHOSIS	19.255
	CA,FEMALE BREAST	19.255
	OTHER DIGESTIVE	12.837
	SUICIDE	6.418
	MOTOR VEHICLE A.	6.418
	OTHER,URINARY	6.418
	OTH.RESPIRATORY	6.418
	INTRACEREBRAL	6.418
	OTH.PUL.EMBOLISM	6.418
	ALCOHOL AND DRUG	6.418
	OTHER METABOLIC	6.418
	OTHER UNSPEC.CA	6.418
	CA,OTHER GEN. UR	6.418
	CA,TRACHEA,LUNG	6.418
45-54	CA,FEMALE BREAST	48.201
	FALLS	16.067
	SUBARACHNOID	16.067
	MYOCARDIAL INF.	16.067
	CA,LYMPHATIC	16.067
	CA,OTHER GEN. UR	16.067
	CA,TRACHEA,LUNG	16.067
	CA,OTHER DIGEST	16.067
	SUICIDE	8.033

APPENDIX 5 (b)

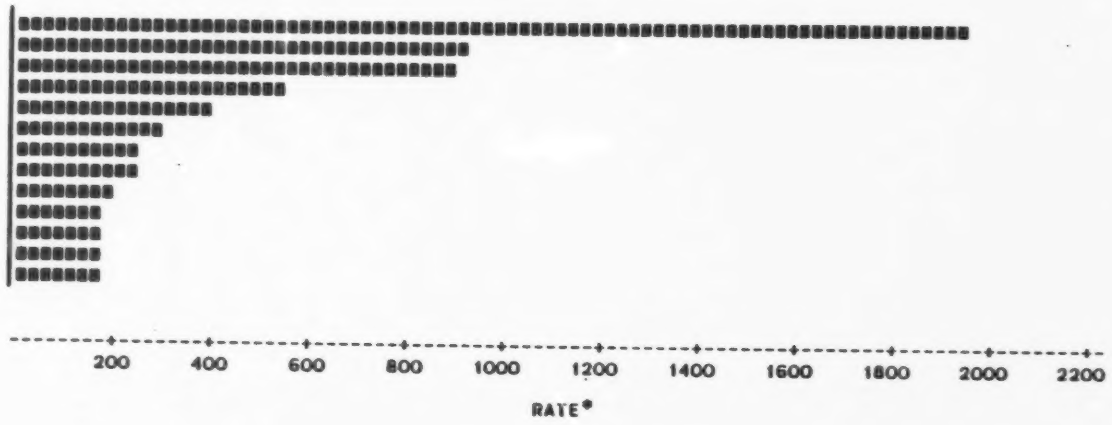
MAJOR AGE- SEX- AND CAUSE- SPECIFIC MORTALITY RATES*
IN NORTHERN HEALTH AREA FEMALES, 1981

```
 AGE
GROUP  CAUSE                                                      RATE*

       MOTOR VEHICLE A.   |                                       8.033
       PNEUMONIA          |                                       8.033
       ACUTE CEREBBROVA   |                                       8.033
       OTH.PULMON.HEART   |                                       8.033
       ISCHAEMIC HEART    |                                       8.033
       ALL OTHER CNS      |                                       8.033
       ALL MENTAL DIS.    |                                       8.033
       ALCOHOL AND DRUG   |                                       8.033
       CA,CERVIX UTERI    |                                       8.033
       CA,UTERUS          |                                       8.033
       CA,COLON,RECTUM    |                                       8.033
       CA,STOMACH,INT.    |                                       8.033
       CA,STOMACH         |                                       8.033

55-64  CA,TRACHEA,LUNG    |■■                                    51.791
       CA,FEMALE BREAST   |■■                                    43.159
       CA,OTHER DIGEST    |■■                                    43.159
       CA,UNSPEC.SITES    |■                                     34.527
       CA,OTHER GEN. UR   |■                                     34.527
       CA,COLON,RECTUM    |■                                     34.527
       ILL DEFINED COND   |■                                     25.896
       OTH.PULMON.HEART   |■                                     25.896
       MYOCARDIAL INF.    |■                                     25.896
       SUICIDE            |■                                     17.264
       ACUTE CEREBBROVA   |■                                     17.264
       CEREBRAL INFARC.   |■                                     17.264
       OTH.PUL.EMBOLISM   |■                                     17.264
       ISCHAEMIC HEART    |■                                     17.264
       CA,ORAL CAVITY     |■                                     17.264

65-74  MYOCARDIAL INF.    |■■■■■■■■■■                           238.368
       ISCHAEMIC HEART    |■■■■■■■                              171.625
       CA,TRACHEA,LUNG    |■■■■■                                114.416
       CA,COLON,RECTUM    |■■■                                   76.278
       CA,FEMALE BREAST   |■■■                                   66.743
       CA,OTHER DIGEST    |■■■                                   66.743
       OTH.RESPIRATORY    |■■                                    57.208
       ACUTE CEREBBROVA   |■■                                    57.208
       CA,UNSPEC.SITES    |■■                                    57.208
       ILL DEFINED COND   |■■                                    47.674
       CA,OTHER GEN. UR   |■■                                    47.674

75-84  ISCHAEMIC HEART    |■■■■■■■■■■■■■■■■■■■■■■■■             586.585
       MYOCARDIAL INF.    |■■■■■■■■■■■■■■■■■■■■■■■■             586.585
       ACUTE CEREBBROVA   |■■■■■■■■■■                           242.285
       CA,FEMALE BREAST   |■■■■■■■                              178.526
       PNEUMONIA          |■■■■■■                               153.022
       CEREBRAL INFARC.   |■■■■■                                127.518
       INTRACEREBRAL      |■■■■                                 102.015
       DIABETES MEL.      |■■■■                                 102.015
       CA,OTHER DIGEST    |■■■■                                 102.015
       CA,COLON,RECTUM    |■■■■                                 102.015
```

APPENDIX 5 (c)

MAJOR AGE- SEX- AND CAUSE- SPECIFIC MORTALITY RATES* IN NORTHERN HEALTH AREA FEMALES, 1981

AGE GROUP	CAUSE	RATE*
85+	ISCHAEMIC HEART	1950.051
	ACUTE CEREBBROVA	923.709
	MYOCARDIAL INF.	889.497
	PNEUMONIA	547.383
	ATHEROSCLEROSIS	410.537
	FALLS	307.903
	OTH.PULMON.HEART	239.480
	PSYCHOSES	239.480
	CA,OTHER GEN. UR	205.269
	OTHER DIGESTIVE	171.057
	CEREBRAL INFARC.	171.057
	CA,COLON,RECTUM	171.057
	CA,STOMACH	171.057



* Per 100,000 females

APPENDIX 6 (a)

MAJOR AGE- SEX- AND CAUSE- SPECIFIC MORTALITY RATES* IN DOWNTOWN HEALTH AREA MALES, 1981

AGE GROUP	CAUSE		RATE*
5-14	HOMICIDE	■	25.674
	MOTOR VEHICLE A.	■	25.674
	ALL CONG.ANOMAL.	■	25.674
15-24	SUICIDE	■	21.647
	OTHER EXT.INJURY	■	10.824
	MOTOR VEHICLE A.	■	10.824
25-34	SUICIDE	■■	49.072
	MOTOR VEHICLE A.	■	24.536
	HOMICIDE	■	16.357
	ILL DEFINED COND	■	16.357
	DRUG POISONING		8.179
	ISCHAEMIC HEART		8.179
	EPILEPSY		8.179
	HODGKIN S DIS.		8.179
35-44	CIRRHOSIS	■■	47.680
	ISCHAEMIC HEART	■■	47.680
	OTHER EXT.INJURY	■■	31.786
	OTHER ACCIDENTS	■■	31.786
	OTHER DIGESTIVE	■■	31.786
	MYOCARDIAL INF.	■■	31.786
	SUICIDE	■	15.893
	MOTOR VEHICLE A.	■	15.893
	ALL CONG.ANOMAL.	■	15.893
	SUBARACHNOID	■	15.893
	OTH.PULMON.HEART	■	15.893
	DYSRHYTHMIAS	■	15.893
	HYPERTENSIVE H.D	■	15.893
	ALCOHOL AND DRUG	■	15.893
	CA,LYMPHATIC	■	15.893
	LEUKAEMIA	■	15.893
	CA,ORAL CAVITY	■	15.893
45-54	MYOCARDIAL INF.	■■■■■■■■	164.406
	CIRRHOSIS	■■■■■	102.754
	SUICIDE	■■■■	82.203
	ALCOHOL AND DRUG	■■■	61.652
	CA,UNSPEC.SITES	■■■	61.652
	CA,TRACHEA,LUNG	■■■	61.652
	OTHER ACCIDENTS	■■	41.102
	DRUG POISONING	■■	41.102
	NEPHRITIS	■■	41.102
	INTRACEREBRAL	■■	41.102
	ISCHAEMIC HEART	■■	41.102
	DIABETES MEL.	■■	41.102
	CA,ORAL CAVITY	■■	41.102

APPENDIX 6 (b)

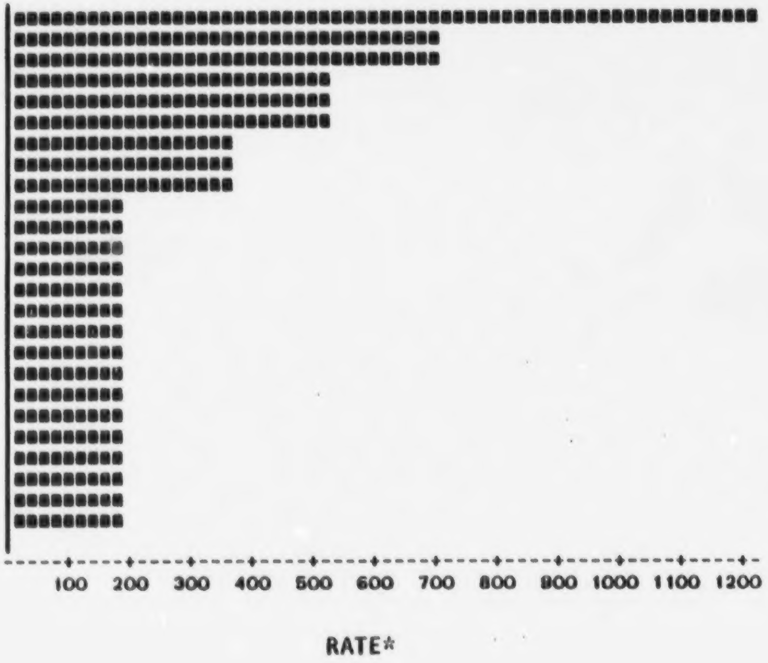
MAJOR AGE- SEX- AND CAUSE- SPECIFIC MORTALITY RATES* IN DOWNTOWN HEALTH AREA MALES, 1981

AGE GROUP	CAUSE	RATE*
55-64	ISCHAEMIC HEART	399.600
	MYOCARDIAL INF.	274.725
	ILL DEFINED COND	249.750
	CA,TRACHEA,LUNG	249.750
	OTHER DIGESTIVE	174.825
	CIRRHOSIS	124.875
	OTH.RESPIRATORY	99.900
	OTH.PULMON.HEART	99.900
	ACUTE CEREBBROVA	74.925
	CA,OTHER DIGEST	74.925
65-74	ISCHAEMIC HEART	739.550
	MYOCARDIAL INF.	707.395
	CA,TRACHEA,LUNG	546.624
	OTH.RESPIRATORY	257.235
	ILL DEFINED COND	225.080
	OTHER DIGESTIVE	160.772
	CA,OTHER DIGEST	160.772
	CA,COLON,RECTUM	160.772
	CIRRHOSIS	128.617
	PNEUMONIA	128.617
	ACUTE CEREBBROVA	128.617
75-84	ISCHAEMIC HEART	1190.476
	OTH.RESPIRATORY	736.961
	MYOCARDIAL INF.	736.961
	ACUTE CEREBBROVA	510.204
	CA,TRACHEA,LUNG	453.515
	PNEUMONIA	340.136
	CA,OTHER GEN. UR	340.136
	ILL DEFINED COND	283.447
	OTH.PULMON.HEART	283.447
	ART.EMBO. AND TH	170.068
	CEREBRO.ATHEROS	170.068
	DYSRHYTHMIAS	170.068
	DIABETES MEL.	170.068
	CA,COLON,RECTUM	170.068

APPENDIX 6 (c)

MAJOR AGE- SEX- AND CAUSE- SPECIFIC MORTALITY RATES*
IN DOWNTOWN HEALTH AREA MALES, 1981

AGE GROUP	CAUSE	RATE*
85+	ISCHAEMIC HEART	1225.919
	OTH.RESPIRATORY	700.525
	CA,OTHER GEN. UR	700.525
	OTHER DIGESTIVE	525.394
	PNEUMONIA	525.394
	ACUTE CEREBBROVA	525.394
	ILL DEFINED COND	350.263
	DYSRHYTHMIAS	350.263
	MYOCARDIAL INF.	350.263
	SUICIDE	175.131
	FALLS	175.131
	OTHER,URINARY	175.131
	NEPHRITIS	175.131
	CIRRHOSIS	175.131
	INTESTINAL OBST.	175.131
	ART.EMBO. AND TH	175.131
	ATHEROSCLEROSIS	175.131
	CEREBRAL INFARC.	175.131
	INTRACEREBRAL	175.131
	OTH.PULMON.HEART	175.131
	HYPERTENSIVE H.D	175.131
	PSYCHOSES	175.131
	CA,TRACHEA,LUNG	175.131
	CA,COLON,RECTUM	175.131
	CA,STOMACH	175.131



* Per 100,000 males

APPENDIX 7 (a)

MAJOR AGE- SEX- AND CAUSE- SPECIFIC MORTALITY RATES* IN DOWNTOWN HEALTH AREA FEMALES, 1981

AGE GROUP	CAUSE		RATE*
1-4	MOTOR VEHICLE A.	■■■	73.638
	ALL CONG.ANOMAL.	■■■	73 638
	OTH.RESPIRATORY	■■■	73.638
5-14	CA,LYMPHATIC	■	27.647
	LEUKAEMIA	■	27.647
15-24	HOMICIDE		10.015
	OTH.PULMON.HEART		10.015
	MYOCARDIAL INF.		10.015
	LEUKAEMIA		10.015
	HODGKIN S DIS.		10.015
25-34	SUICIDE	■■	37.739
	DRUG POISONING	■	18.870
	ILL DEFINED COND	■	18.870
	CA,FEMALE BREAST	■	18.870
	HOMICIDE		9.435
	BURNS		9.435
	FALLS		9.435
	PNEUMONIA		9.435
	DIABETES MEL.		9.435
35-44	ILL DEFINED COND	■	19.646
	OTHER DIGESTIVE	■	19.646
	ACUTE CEREBBROVA	■	19.646
	ISCHAEMIC HEART	■	19.646
	CA,LYMPHATIC	■	19.646
	LEUKAEMIA	■	19.646
	CA,UTERUS	■	19.646
45-54	MYOCARDIAL INF.	■■■	74.590
	CA,TRACHEA,LUNG	■■■	74.590
	FALLS	■	24.863
	DRUG POISONING	■	24.863
	ILL DEFINED COND	■	24.863
	CIRRHOSIS	■	24.863
	ATHEROSCLEROSIS	■	24.863
	ACUTE CEREBBROVA	■	24.863
	INTRACEREBRAL	■	24.863
	OTH.HYPERTENSIVE	■	24.863
	ALL MENTAL DIS.	■	24.863
	CA,OTHER GEN. UR	■	24.863
	CA,FEMALE BREAST	■	24.863
	CA,LARYNX	■	24.863

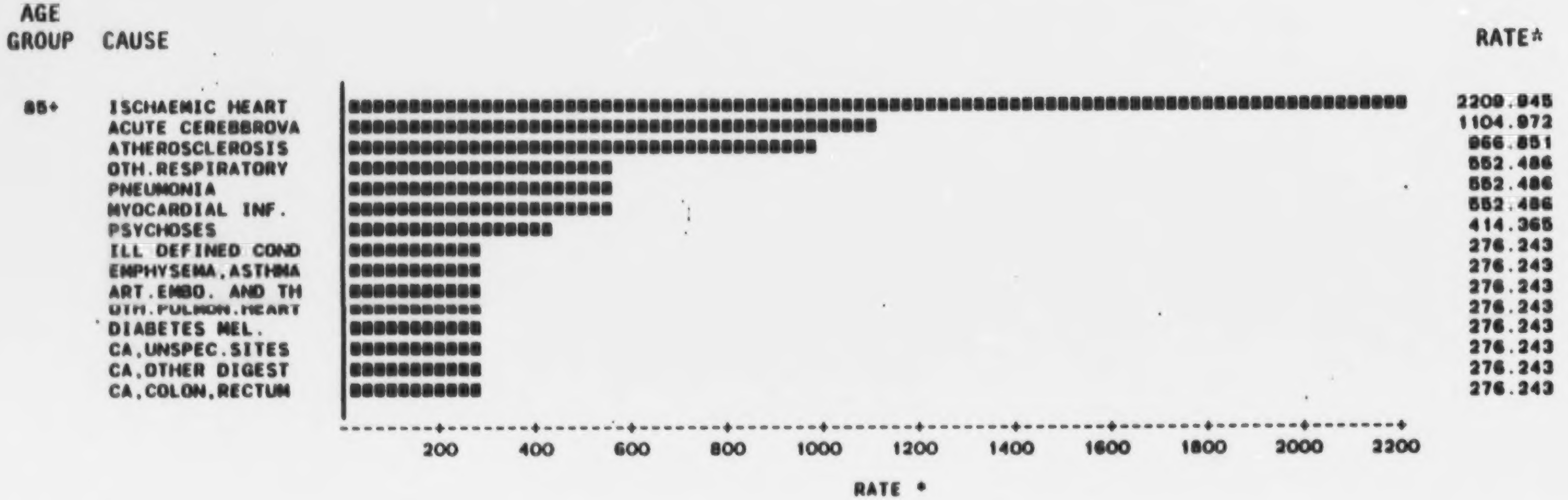
APPENDIX 7 (b)

MAJOR AGE- SEX- AND CAUSE- SPECIFIC MORTALITY RATES* IN DOWNTOWN HEALTH AREA FEMALES, 1981

AGE GROUP	CAUSE		RATE*
55-64	MYOCARDIAL INF.	■■■■■■	159.532
	CA,FEMALE BREAST	■■■■■	132.943
	OTH.RESPIRATORY	■■■	79.766
	OTHER EXT.INJURY	■■	53.177
	CIRRHOSIS	■■	53.177
	ACUTE CEREBBROVA	■■	53.177
	CA,OTHER GEN. UR	■■	53.177
	CA,TRACHEA,LUNG	■■	53.177
	CA,OTHER DIGEST	■■	53.177
	CA,COLON,RECTUM	■■	53.177
	CA,ORAL CAVITY	■■	53.177
65-74	ISCHAEMIC HEART	■■■■■■■■■■■■■■■■■■	439.883
	MYOCARDIAL INF.	■■■■■■■■■■■■■	322.581
	CA,OTHER DIGEST	■■■■■■■	175.953
	CA,TRACHEA,LUNG	■■■■■■	146.628
	CA,COLON,RECTUM	■■■■■■	146.628
	ILL DEFINED COND	■■■■	87.977
	OTHER DIGESTIVE	■■■■	87.977
	OTH.RESPIRATORY	■■■■	87.977
	PNEUMONIA	■■■■	87.977
	CA,FEMALE BREAST	■■■■	87.977
75-84	ISCHAEMIC HEART	■■	1011.494
	ACUTE CEREBBROVA	■■■■■■■■■■■■■	321.839
	MYOCARDIAL INF.	■■■■■■■■■■■■■	321.839
	OTH.PULMON.HEART	■■■■■■■■■	229.885
	OTH.RESPIRATORY	■■■■■■■	183.908
	DYSRHYTHMIAS	■■■■■■	137.931
	CA,STOMACH	■■■■■■	137.931
	ILL DEFINED COND	■■■■	91.954
	ATHEROSCLEROSIS	■■■■	91.954
	PSYCHOSES	■■■■	91.954
	CA,OTHER DIGEST	■■■■	91.954

APPENDIX 7 (c)

MAJOR AGE- SEX- AND CAUSE- SPECIFIC MORTALITY RATES*
IN DOWNTOWN HEALTH AREA FEMALES, 1981



* Per 100,000 females

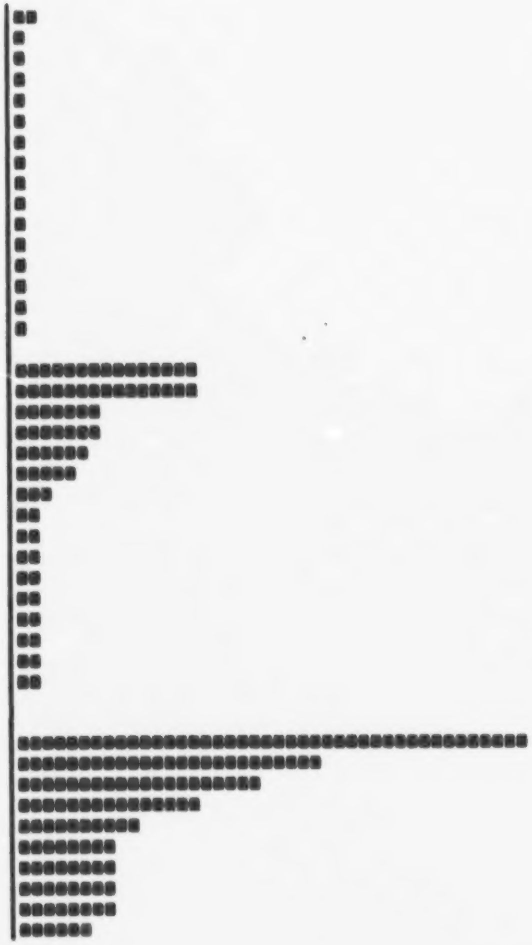
APPENDIX 8 (a)

MAJOR AGE- SEX- AND CAUSE- SPECIFIC MORTALITY RATES* IN EASTERN HEALTH AREA MALES, 1981

AGE GROUP	CAUSE		RATE*
5-14	NEPHRITIS	■	11.816
	CA,OTHER GEN. UR	■	11.816
15-24	DRUG POISONING	■	10.322
	OTHER EXT.INJURY		9.661
	SUICIDE		9.661
	OTHER ACCIDENTS		9.661
	MOTOR VEHICLE A.		9.661
	OTH.PULMON.HEART		9.661
	CA,LYMPHATIC		9.661
	OTHER VIRAL DIS.		9.661
25-34	SUICIDE	■	26.071
	DROWNING,SUBMER.		8.990
	SOLID, LIQUID PO		8.990
	DRUG POISONING		8.990
	MOTOR VEHICLE A.		8.990
	ILL DEFINED COND		8.990
	VEINS,LYMPHATICS		8.990
	INTRACEREBRAL		8.990
	MYOCARDIAL INF.		8.990
	EPILEPSY		8.990
	CA,OTHER DIGEST		8.990
	OTHER PARASITIC		8.990
35-44	ISCHAEMIC HEART	■■■	52.556
	MYOCARDIAL INF.	■■■	52.556
	CA,TRACHEA,LUNG	■	26.278
	OTHER EXT.INJURY	■	13.139
	OTHER ACCIDENTS	■	13.139
	FALLS	■	13.139
	DRUG POISONING	■	13.139
	MOTOR VEHICLE A.	■	13.139
	ILL DEFINED COND	■	13.139
	NEPHRITIS	■	13.139
	OTHER DIGESTIVE	■	13.139
	CIRRHOSIS	■	13.139
	CEREBRAL INFARC.	■	13.139
	INTRACEREBRAL	■	13.139
	OTHER UNSPEC.CA	■	13.139
	CA,UNSPEC.SITES	■	13.139
45-54	MYOCARDIAL INF.	■■■■■	90.171
	ISCHAEMIC HEART	■■■■	75.143
	CA,TRACHEA,LUNG	■■■	60.114
	CIRRHOSIS	■■	45.086
	ALCOHOL AND DRUG	■■	45.086
	OTHER DIGESTIVE	■■	30.057
	ALL OTHER CNS	■■	30.057
	EPILEPSY	■■	30.057

APPENDIX 8 (b)

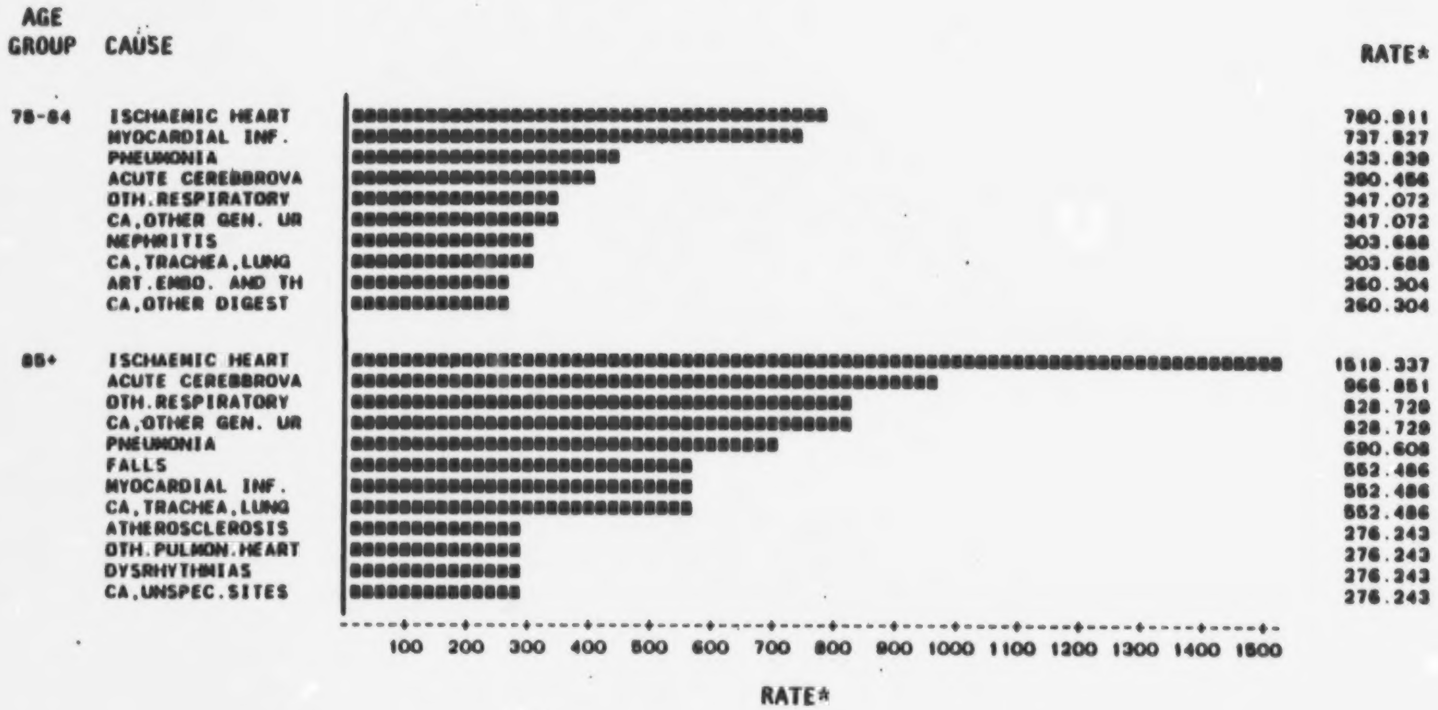
MAJOR AGE- SEX- AND CAUSE- SPECIFIC MORTALITY RATES* IN EASTERN HEALTH AREA MALES, 1981



AGE GROUP	CAUSE	RATE*
	CA,OTHER GEN. UR	30.057
	OTHER EXT.INJURY	15.029
	HOMICIDE	15.029
	SUICIDE	15.029
	ILL DEFINED COND	15.029
	ULCERS	15.029
	OTH.RESPIRATORY	15.029
	EMPHYSEMA,ASTHMA	15.029
	PNEUMONIA	15.029
	ART.EMBO. AND TH	15.029
	INTRACEREBRAL	15.029
	ALL MENTAL DIS.	15.029
	CA,UNSPEC.SITES	15.029
	CA,SKIN	15.029
	CA,COLON,RECTUM	15.029
	CA,ORAL CAVITY	15.029
55-64	MYOCARDIAL INF.	303.571
	CA,TRACHEA,LUNG	303.571
	ISCHAEMIC HEART	142.857
	CA,UNSPEC.SITES	142.857
	CA,OTHER DIGEST	125.000
	CIRRHOSIS	107.143
	CA,ORAL CAVITY	53.571
	FALLS	35.714
	ILL DEFINED COND	35.714
	PNEUMONIA	35.714
	OTH.PULMON.HEART	35.714
	ALL OTHER CNS	35.714
	DIABETES MEL.	35.714
	CA,LARYNX	35.714
	CA,COLON,RECTUM	35.714
	CA,STOMACH	35.714
65-74	MYOCARDIAL INF.	830.607
	CA,TRACHEA,LUNG	503.398
	ISCHAEMIC HEART	402.718
	CA,OTHER DIGEST	302.038
	CIRRHOSIS	201.358
	OTH.RESPIRATORY	151.019
	CA,UNSPEC.SITES	151.019
	CA,OTHER GEN. UR	151.019
	CA,COLON,RECTUM	151.019
	ILL DEFINED COND	125.849

APPENDIX 8 (c)

MAJOR AGE- SEX- AND CAUSE- SPECIFIC MORTALITY RATES*
IN EASTERN HEALTH AREA MALES, 1981



* Per 100,000 males

APPENDIX 9 (a)

MAJOR AGE- SEX- AND CAUSE- SPECIFIC MORTALITY RATES* IN EASTERN HEALTH AREA FEMALES, 1981

AGE GROUP	CAUSE		RATE*
1-4	BURNS	■■	41.288
	MOTOR VEHICLE A.	■■	41.288
	UPPER RESP.TRACT	■■	41.288
5-14	SUICIDE	■	12.547
15-24	MOTOR VEHICLE A.		9.969
25-34	SUICIDE		8.572
	DRUG POISONING		8.572
	MOTOR VEHICLE A.		8.572
	FEM. GENITAL ORG		8.572
35-44	SUICIDE	■■	40.409
	CA,FEMALE BREAST	■■	40.409
	CIRRHOSIS	■	26.940
	CA,TRACHEA,LUNG	■	26.940
	OTHER EXT.INJURY	■	13.470
	OTHER ACCIDENTS	■	13.470
	EMPHYSEMA,ASTHMA	■	13.470
	ARTERIES,CAPILL.	■	13.470
	CA,SKIN	■	13.470
45-54	CA,FEMALE BREAST	■■■	78.027
	CA,COLON,RECTUM	■■■	78.027
	CA,TRACHEA,LUNG	■■	62.422
	CA,OTHER DIGEST	■■	46.816
	HOMICIDE	■	31.211
	SUICIDE	■	31.211
	MYOCARDIAL INF.	■	31.211
	CA,OTHER GEN. UR	■	31.211
	OTHER ACCIDENTS	■	15.605
	MUSCULOSKELETAL	■	15.605
	OTHER,URINARY	■	15.605
	PNEUMONIA	■	15.605
	ACUTE CEREBBROVA	■	15.605
	MULT.SCLEROSIS	■	15.605
	ALCOHOL AND DRUG	■	15.605
	DIABETES MEL.	■	15.605
	CA,UNSPEC.SITES	■	15.605
	CA,CERVIX UTERI	■	15.605
	CA,LARYNX	■	15.605
	VIRAL HEPATITIS	■	15.605
55-64	MYOCARDIAL INF.	■■■■■	127.714
	CA,OTHER GEN. UR	■■■■	95.785

APPENDIX 9 (b)

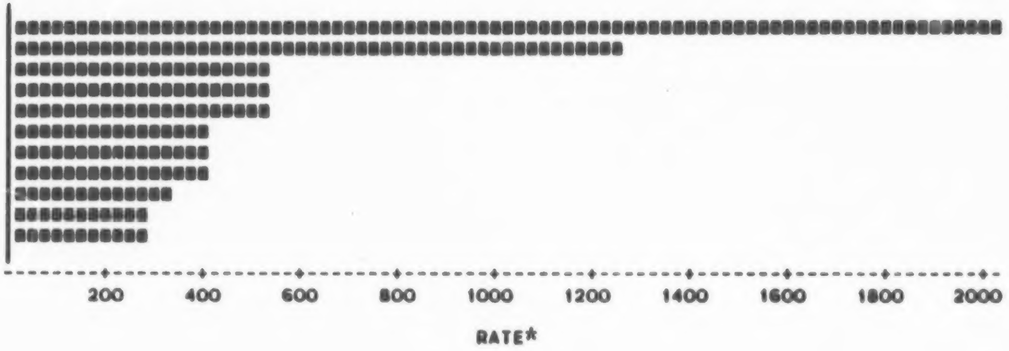
MAJOR AGE- SEX- AND CAUSE- SPECIFIC MORTALITY RATES*
IN EASTERN HEALTH AREA FEMALES, 1981

AGE GROUP	CAUSE		RATE*
	CA,OTHER DIGEST	■■■	70.821
	CA,FEMALE BREAST	■■■	63.857
	CA,TRACHEA,LUNG	■■■	63.857
	CIRRHOSIS	■	31.928
	OTH.RESPIRATORY	■	31.928
	ART.EMBO. AND TH	■	31.928
	INTRACEREBRAL	■	31.928
	OTH.PULMON.HEART	■	31.928
	ISCHAEMIC HEART	■	31.928
65-74	ISCHAEMIC HEART	■■■■■■■■■■■■	290.585
	MYOCARDIAL INF.	■■■■■■■■■■■	271.213
	CA,COLON,RECTUM	■■■■■■■	174.351
	ILL DEFINED COND	■■■	77.489
	ACUTE CEREBBROVA	■■■	77.489
	CA,UNSPEC.SITES	■■■	77.489
	CA,OTHER GEN. UR	■■■	77.489
	CA,TRACHEA,LUNG	■■■	77.489
	OTHER DIGESTIVE	■■	58.117
	CIRRHOSIS	■■	58.117
	PNEUMONIA	■■	58.117
	INTRACEREBRAL	■■	58.117
	OTH.PULMON.HEART	■■	58.117
	CA,FEMALE BREAST	■■	58.117
75-84	MYOCARDIAL INF.	■■■■■■■■■■■■■■■■■■■■■■■■	605.560
	ISCHAEMIC HEART	■■■■■■■■■■■■■■■■■■■■	495.458
	ACUTE CEREBBROVA	■■■■■■■■■■■■■■■■■■	440.407
	OTH.PULMON.HEART	■■■■■■■■■	220.204
	CA,COLON,RECTUM	■■■■■■■■■	220.204
	OTHER DIGESTIVE	■■■■■■■■	192.678
	INTRACEREBRAL	■■■■	110.102
	DIABETES MEL.	■■■■	110.102
	CA,FEMALE BREAST	■■■■	110.102
	CA,TRACHEA,LUNG	■■■■	110.102
	CA,OTHER DIGEST	■■■■	110.102

APPENDIX 9 (c)

MAJOR AGE- SEX- AND CAUSE- SPECIFIC MORTALITY RATES*
IN EASTERN HEALTH AREA FEMALES, 1981

AGE GROUP	CAUSE	RATE*
85+	ISCHAEMIC HEART	2036.794
	MYOCARDIAL INF.	1248.357
	PNEUMONIA	525.624
	ATHEROSCLEROSIS	525.624
	ACUTE CEREBBROVA	525.624
	FALLS	394.218
	OTH.PULMON.HEART	394.218
	DYSRHYTHMIAS	394.218
	ILL DEFINED COND	328.515
	OTHER DIGESTIVE	262.812
	OTH.RESPIRATORY	262.812



* Per 100,000 females

APPENDIX 10a
SUMMARY OF RESULTS BY HEALTH AREA

WHA	NHA	DHA	EHA
POPULATION			
highest proportion of population under 4 years (6.0%)	largest population (36.4% of City)	smallest population (14.6% of City)	high concentrations of single parent families
high concentrations of mother tongue other than English	10.1% of population is 70+	38% of population is 20-34 years of age	highest proportion of English-speaking residents (71.0%)
64.0% of Portuguese population	high concentrations of mother tongue other than English in the west	high concentrations of single parent families	large proportion of Chinese population (36.3%)
	58.6% of Italian population live in this Area of the City	large proportion of Chinese population (33.6%)	Chinese in west and central part of Area

APPENDIX 10b (Cont'd)
SUMMARY OF RESULTS BY HEALTH AREA

WHA	NHA	DHA	EHA
NATALITY			
highest proportion of births (31.5%)	greatest concentrations of HBW infants	lowest proportion of births (13.8%)	highest proportion of LBW babies (but not significantly different from the City)
second highest fertility rate in 15-19 year olds (36.77 per 1,000 women)	highest percent of first births to mothers 35 years and older (11.7%)	20.6% of all live births were to single mothers (significantly higher than percent for the City)	high concentration of teenage mothers in the western end
7 births were to women over age 44	highest mean age of mother (28.5 years)	10.3% of all births were to 15-19 year olds	
highest concentration of premature infants (based on gestational age)	highest % of mothers over age 40 concentrated in south end	highest fertility rate in 15-19 year olds (38.08 per 1,000 women)	
lowest proportion of LBW babies (5.5%)		half the census tracts with a high percent of LBW babies were in DHA	
		mean birthweight lower than City mean, but still within normal range	

APPENDIX 10c (Cont'd)
SUMMARY OF RESULTS BY HEALTH AREA

WHA	NHA	DHA	EHA
MORTALITY			
congenital anomaly most common cause of infant death	congenital anomaly most common cause of infant death	highest perinatal mortality rate	congenital anomaly most common cause of infant death
IHD and MI top 2 causes of death for each sex	NHA	IHD and MI top 2 causes of death for each sex	lowest infant mortality rate (6.7 per 1,000 live births)
lung cancer third leading cause of death in males	IHD and MI top 2 causes of death for each sex	lung cancer third leading cause of death in males	IHD and MI top 2 causes of death for each sex
suicide #4 in males	lung cancer third leading cause of death in males	age-standardized rates highest for ACVD, IHD (significant), colon cancer, cirrhosis, MVA, all causes (significant) in males	lung cancer third leading cause of death in males
breast cancer #4 in females	breast cancer #4 in females	age-standardized rates highest for ACVD, IHD (significant), atherosclerosis, leukemia, cirrhosis, all causes (significant) in females	breast cancer #4 in females
highest age-standardized rates for MI, other genito-urinary cancer, diabetes, suicide (significant) in males	highest age-standardized rate of leukemia in males	mean age at death lower than City mean for males, females, both sexes combined (significant)	highest age-standardized rates for MI, diabetes, suicide, lung cancer, breast cancer, colon cancer, other genito-urinary cancer, all cancers in females

APPENDIX 10d (Cont'd)
SUMMARY OF RESULTS BY HEALTH AREA

WHA	NHA	DHA	EHA
highest age-standardized rates for MVA in females	mean age at death higher than City mean for males, females, both sexes combined (significant)	lowest mean age at death for males, females, both sexes combined (significant)	mean age at death same as City's for males, females, both sexes combined
mean age at death lower than City mean for males and both sexes combined (significant)	highest mean age at death for males, females, and both sexes combined (significant)	suicide, MI, lung cancer in top 10 PYLL - both sexes	suicide, MI lung cancer in top 10 PYLL - both sexes
suicide, MI, lung cancer in top 10 PYLL - both sexes	suicide, MI, lung cancer in top 10 PYLL - both sexes	breast cancer in top 10 PYLL - females	breast cancer in top 10 PYLL - females
breast cancer in top 10 PYLL - females	breast cancer in top 10 PYLL in females	IHD and cirrhosis in top 10 PYLL - males	IHD and cirrhosis in top 10 PYLL - males
IHD and cirrhosis in top 10 PYLL - males	IHD and cirrhosis in top 10 PYLL - males	rate of cirrhosis higher than province in males	rate of cirrhosis higher than province in males
rates of suicide and cirrhosis higher than province in males			rate of female suicide twice as high as province